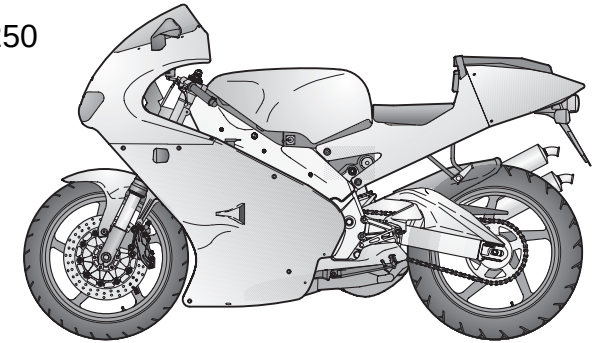
aprilia

use and maintenance

aprilia part# **8102854**

RS 250



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Before starting the engine, carefully read this manual, paying particular attention to the chapter "RIDING SAFELY".
Your and other people's safety depends not only on your quickness of reflexes and on your agility, but also on what you know about the vehicle, on its efficiency and on your knowledge of the basic information for RIDING SAFELY. Therefore, get a thorough knowledge of the vehicle, in such a way as to be able to drive in the traffic safely.
For the controls and repairs not expressly described in this manual, for the purchase of **aprilia** Genuine Spare Parts, accessories and other products, as well as for specific technical advice, contact only **aprilia** Authorized Outlets and Official Dealers, who can ensure you reliable and prompt servicing.

Thank you for choosing **aprilia**. We wish you a nice ride.

IMPORTANT:

When asking your Dealer for spare parts, specify the spare parts code indicated on the SPARE PARTS IDENTIFICATION LABEL.
Write down the identification code in the space here below, in order to remember it also in case of loss or deterioration of the label.
The label is positioned under the rider saddle, see p. 58 (REMOVING THE RIDER SADDLE).

aprilia CODICE RICAMBI spare parts code number

N°			I.M.	A	B	C	D	E
I	UK	A	P	SF	B	D	F	E
GR	NL	CH	DK	J	SGP	PL	IL	ROK
MAL	RCH	BM	USA					

Carefully observe the instructions preceded by the following warning signs:

Safety norms and regulations to protect the driver and other people from severe injuries or grave risks.

Indications to make the operations easier. Technical information.

★ **The operations preceded by this symbol must be repeated on the opposite side of the vehicle.**

In this manual the various versions are indicated by the following symbols:

- **OPT** optional
- **ASD** automatic light switching version (Automatic Switch-on Device)
- catalytic version
- **I** Italy version
- **UK** United Kingdom version
- **A** Austria version
- **P** Portugal version
- **SF** Finland version
- **B** Belgium version
- **D** Germany version
- **F** France version
- **E** Spain version
- **GR** Greece version
- **NL** Holland version
- **CH** Switzerland version
- **DK** Denmark version
- **J** Japan version
- **SGP** Singapore version
- **PL** Poland version
- **IL** Israel version
- **ROK** South Korea version
- **MAL** Malaysia version
- **RCH** Chile version
- **BM** Bermuda version
- **USA** United States of America version

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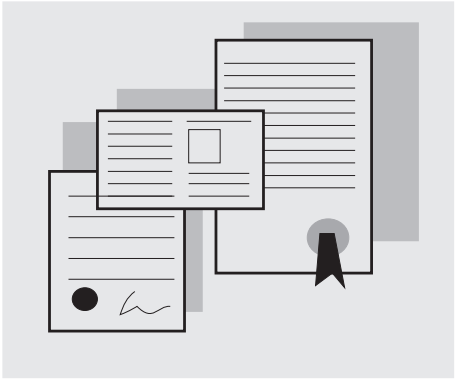
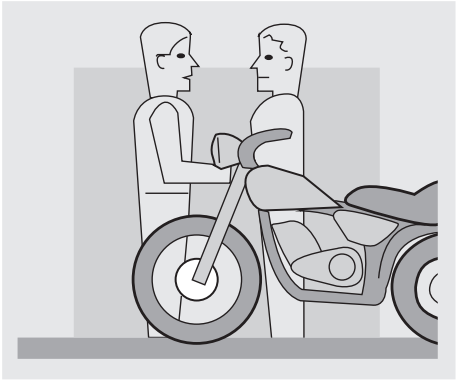
aprilia

safe drive





BASIC SAFETY RULES

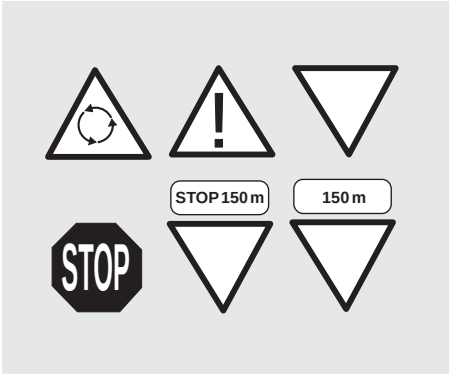
To drive the vehicle it is necessary to be in possession of all the requirements prescribed by law (driving licence, minimum age, psychophysical ability, insurance, state taxes, vehicle registration, number plate, etc.).

Gradually get to know the vehicle by driving it first in areas with low traffic and/or private areas.

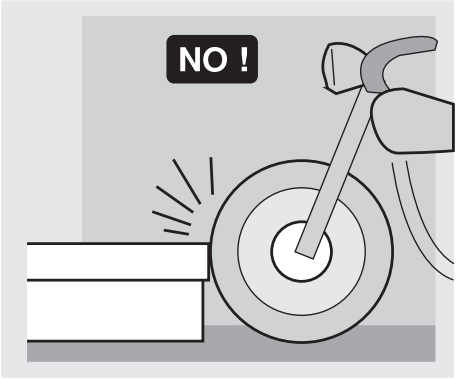
The use of medicins, alcohol and drugs or psychotropic substances notably increases the risk of accidents.
Be sure that you are in good psychophysical conditions and fit for driving and pay particular attention to physical weariness and drowsiness.

Most road accidents are caused by the driver's lack of experience.

NEVER lend the vehicle to beginners and, in any case, make sure that the driver has all the requirements for driving.

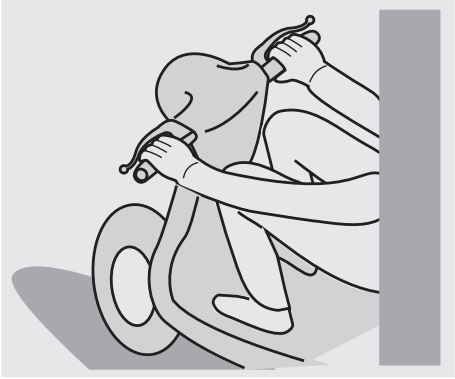


Rigorously observe all road signs and national and local road regulations.
Avoid abrupt movements that can be dangerous for yourself and other people (for example: rearing up on the back wheel, speeding, etc.), and give due consideration to the road surface, visibility and other driving conditions.



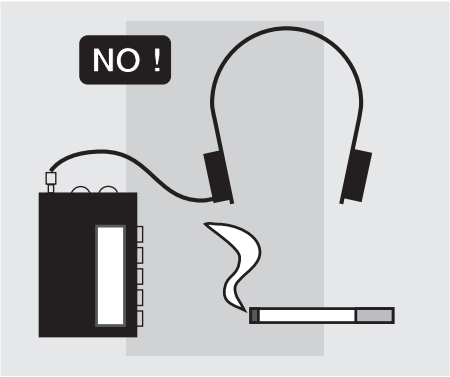
Avoid obstacles that could damage the vehicle or make you lose control.

Avoid riding in the slipstream created by preceding vehicles in order to increase your speed.

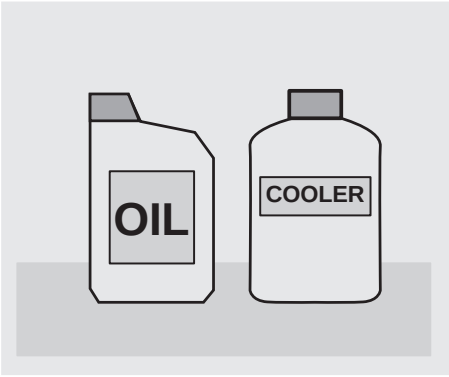


Always drive with both hands on the handlebars and both feet on the footrests (or on the rider's footboards), in the correct driving posture.

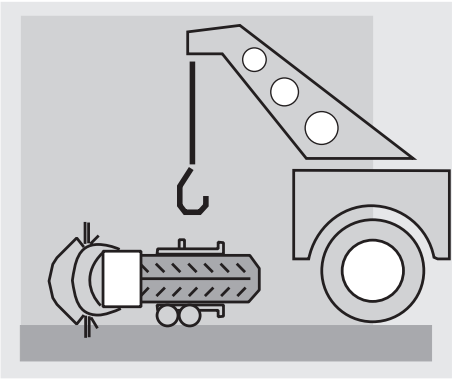
Avoid standing up or stretching your limbs while driving.



The driver should pay attention and avoid distractions caused by people, things and movements (never smoke, eat, drink, read, etc.) while driving.



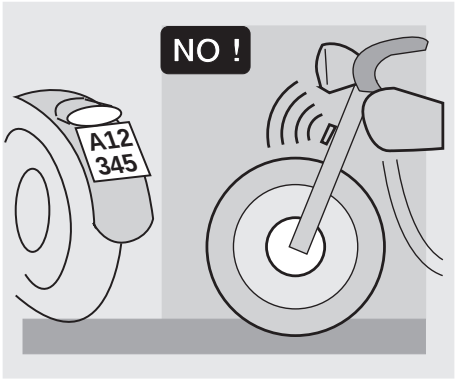
Use only the vehicle's specific fuels and lubricants indicated in the "LUBRICANT CHART"; check the oil, fuel and coolant levels regularly.

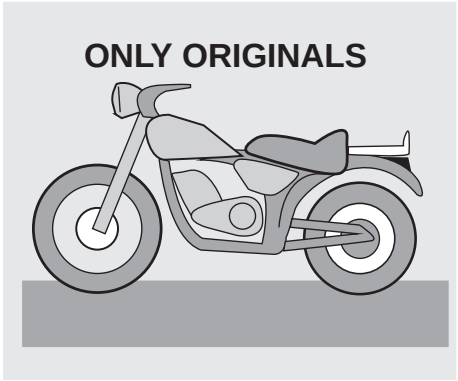


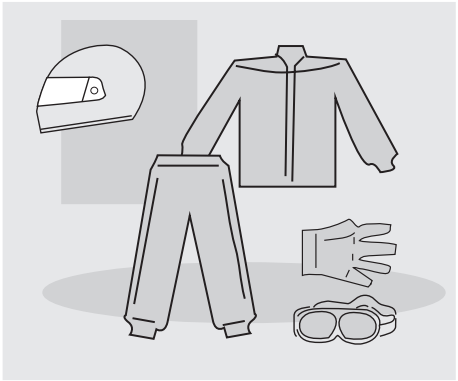
If the vehicle has been involved in an accident, make sure that no damage has occurred to the control levers, pipes, wires, braking system and vital parts.
If necessary, have the vehicle inspected by an **aprilia** Official Dealer, who should carefully check the frame, handlebars, suspensions, safety parts and all the devices that you cannot check by yourself.

Always remember to report any malfunction to the technicians to help them in their work.

Never use the vehicle when the amount of damage it has suffered endangers your safety.







Never change the position, inclination or colour of: number plate, direction indicators, lights and horns.

Any modification of the vehicle and/or the removal of original components can compromise vehicle performance levels and safety or even make it illegal.

We recommend respecting all regulations and national and local provisions regarding the equipment of the vehicle.

In particular, avoid all modifications that increase the vehicle's performance levels or alter its original characteristics.

Never race with other vehicles.

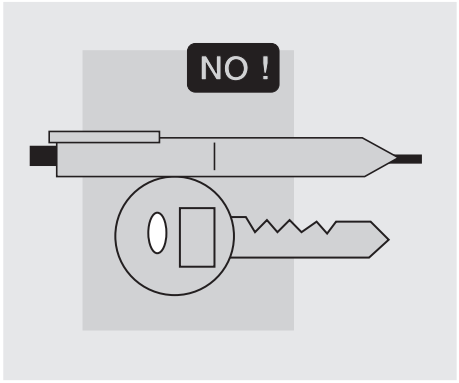
Avoid off-road driving.

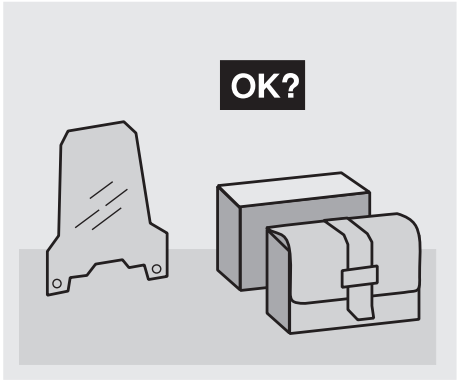
CLOTHING

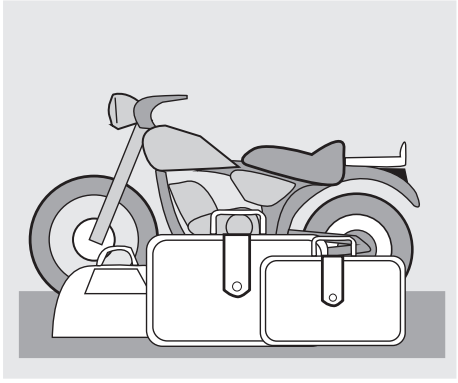
Before starting, always wear a correctly fastened crash helmet. Make sure that it is homologated, in good shape, of the right size and that the visor is clean.

Wear protective clothing, preferably in light and/or reflecting colours. In this way you will make yourself more visible to the other drivers, thus notably reducing the risk of being knocked down, and you will be more protected in case of fall.

This clothing should be very tight-fitting and fastened at the wrists and ankles. Strings, belts and ties should not be hanging loose; prevent these and other objects from interfering with driving by getting entangled with moving parts or driving mechanisms.







Do not keep objects that can be dangerous in case of fall, for example pointed objects like keys, pens, glass vials etc. in your pockets (the same recommendations also apply to passengers).

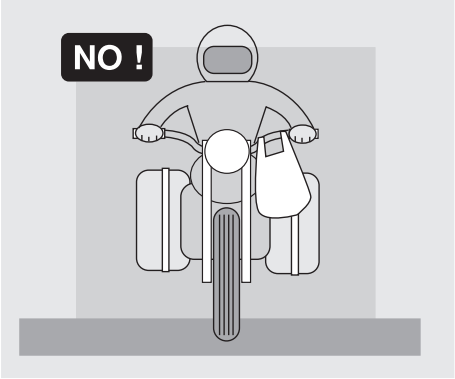
ACCESSORIES

The owner of the vehicle is responsible for the choice, installation and use of any accessory.
Avoid installing accessories that cover horns or lights or that could impair their functions, limit the suspension stroke and the steering angle, hamper the operation of the controls and reduce the distance from the ground and the angle of inclination in turns.
Avoid using accessories that hamper access to the controls, since this can prolong reaction times during an emergency.
Large fairings and windscreens assembled on the vehicle can produce aerodynamic forces capable of compromising the stability of the vehicle while driving.

Make sure that the equipment is well fastened to the vehicle and not dangerous during driving. Do not install electrical devices and do not modify those already existing to avoid electrical overloads, because the vehicle could suddenly stop or there could be a dangerous current shortage in the horn and in the lights. **aprilia** recommends the use of genuine accessories (**aprilia** genuine accessories).

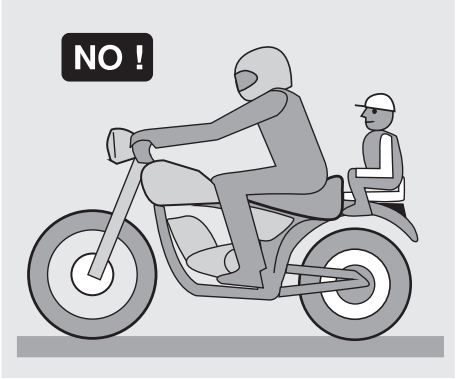
LOAD

Be careful and moderate when loading your luggage. Keep any luggage loaded as close as possible to the centre of the vehicle and distribute the load uniformly on both sides, in order to reduce imbalance to the minimum. Furthermore, make sure that the load is firmly secured to the vehicle, especially during long trips.



Avoid hanging bulky, heavy and/or dangerous objects on the handlebars, mudguards and forks, because the vehicle might respond more slowly in turns and its manoeuvrability could be unavoidably impaired.

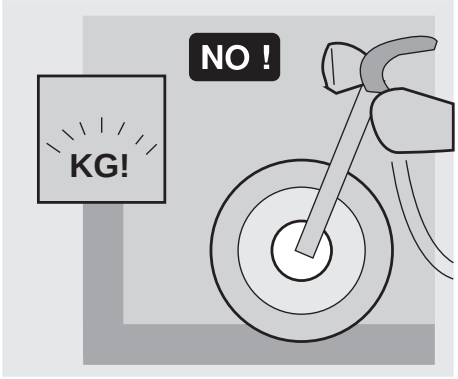
Do not place bags that are too bulky on the vehicle sides and do not ride with the crash helmet hanging from its string, because it could hit people or obstacles making you lose control of the vehicle.



Do not carry any bag if it is not tightly secured to the vehicle.

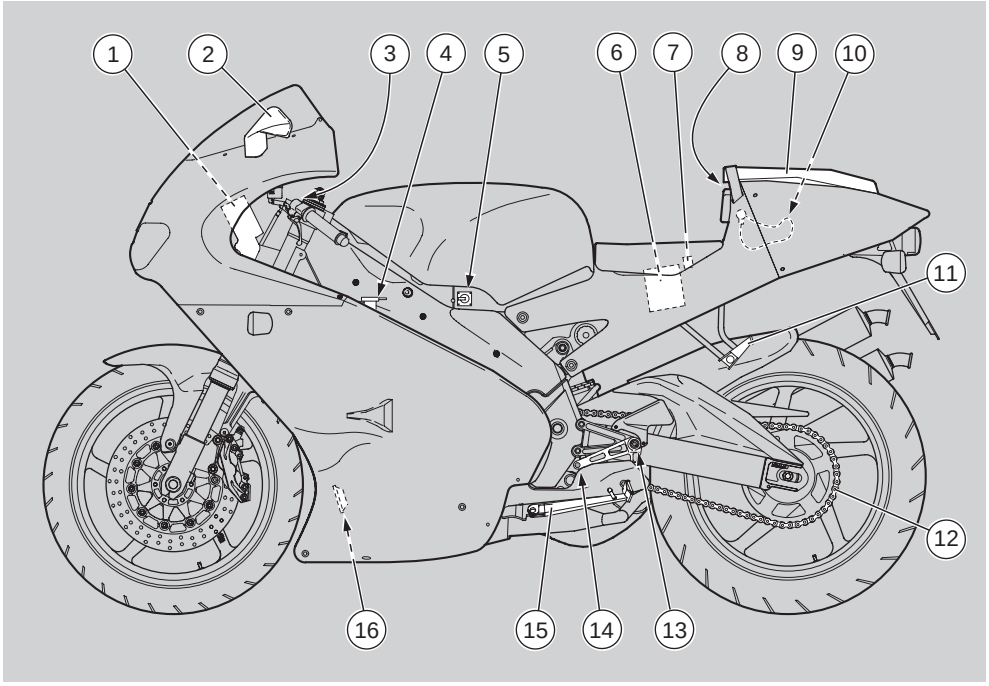
Do not carry bags which protrude too much from the luggage rack or which cover the lights, horn or indicators.

Do not carry animals or children on the glove compartment or on the luggage rack.



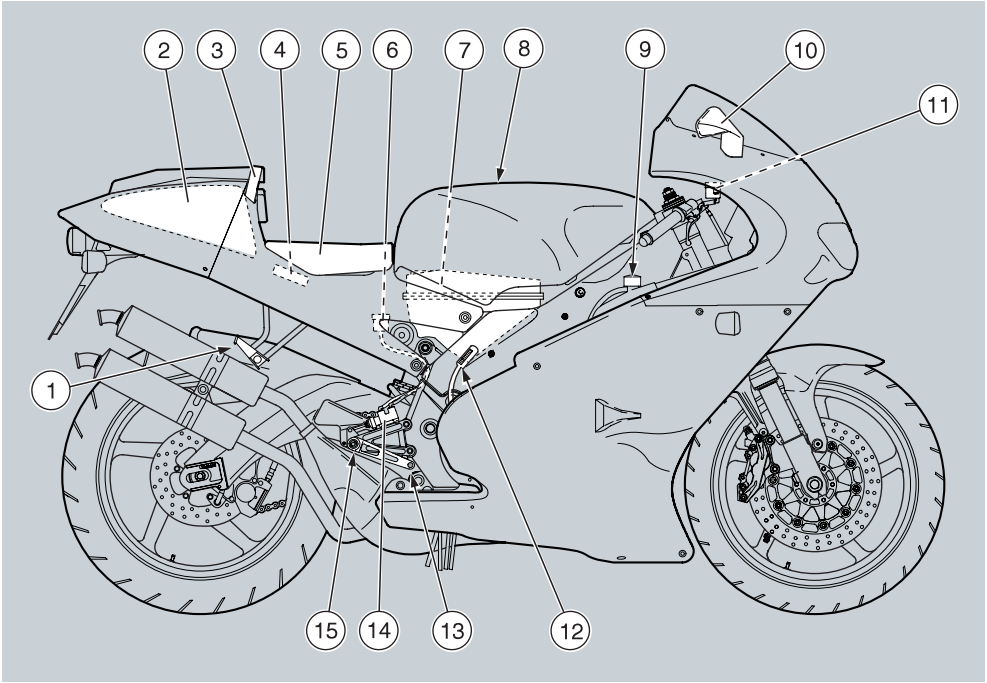
Do not exceed the maximum load allowed for each side-bag.

When the vehicle is overloaded, its stability and its manoeuvrability can be compromised.



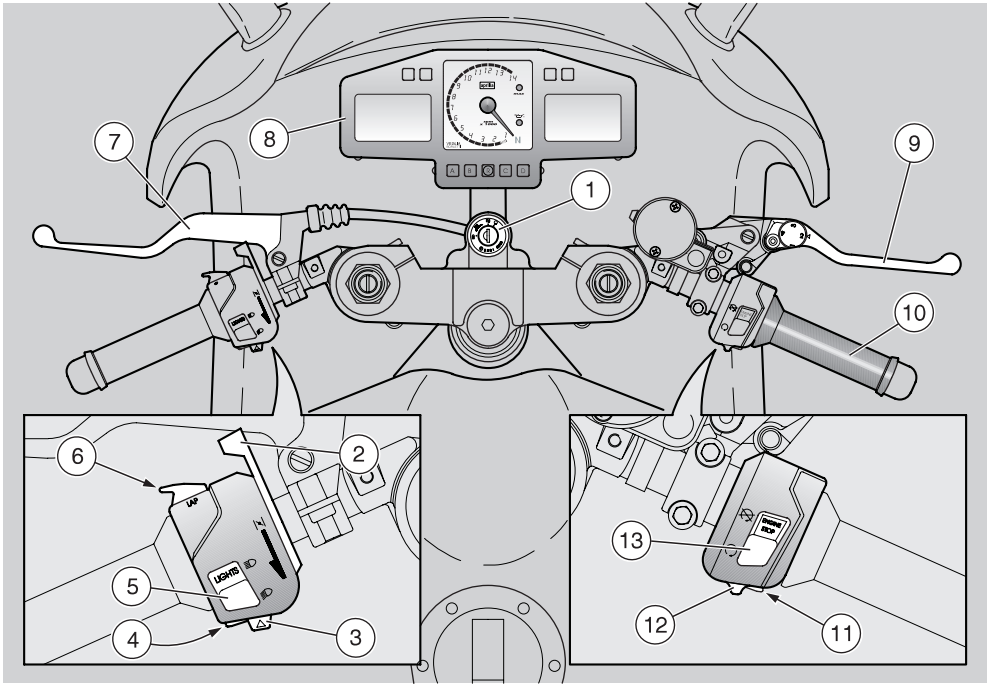
KEY

1) Dashboard
2) Left rear-view mirror
3) Ignition switch
4) Mixer oil plug
5) Fuel cock
6) Battery
7) Fuses
8) Glove/tool kit compartment lock
9) Passenger seat
10) Crash helmet cable
11) Passenger left footrest (snapping, closed/open)
12) Drive chain
13) Rider left footrest (with spring, always open)
14) Shifting lever
15) Side stand
16) Horn



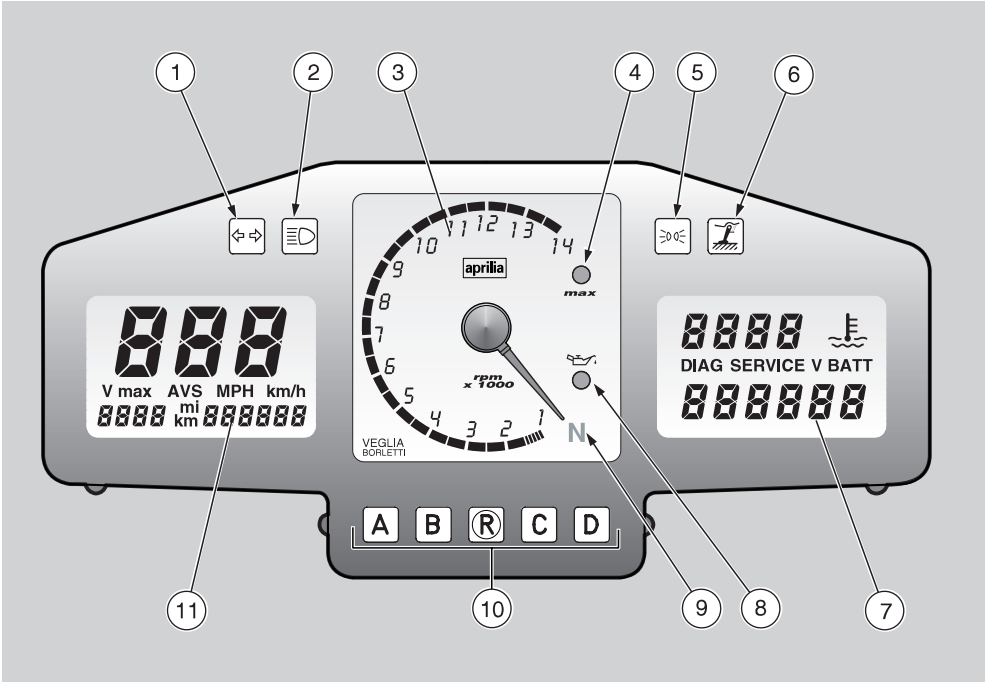
KEY

1) Passenger right footrest (snapping, closed/open)
2) Glove/tool kit compartment
3) Passenger grab strap
4) Electronic unit
5) Rider saddle
6) Rear brake fluid tank
7) Air cleaner
8) Fuel tank plug
9) Coolant plug
10) Right rear-view mirror
11) Front brake fluid tank
12) Starting lever
13) Rear brake control lever
14) Rear brake pump
15) Rider right footrest (with spring, always open)



KEY

1) Ignition switch/steering lock (○ - ⊗ - 🔒)
2) Cold start lever ( )
3) Direction indicator switch (⇦⇨)
4) Horn push button ( )
5) Dimmer switch (-)
6) LAP push button (multifunction)
7) Clutch lever
8) Instruments and indicators
9) Front brake lever
10) Throttle grip
11) High beam signalling push button ( )
12) Light switch (- - •) (not provided for **ASD**)
13) Engine stop switch (○ - ⊗)

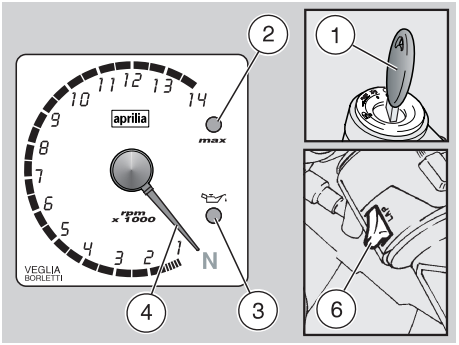


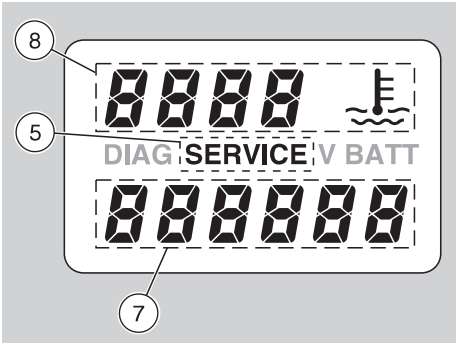
KEY

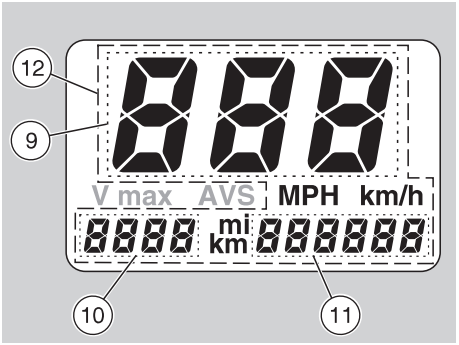
1) Green direction indicator warning light (⇦⇨)
2) Blue high beam warning light (≣D)
3) Revolution counter
4) Programmable red line warning light LED (***max***)
5) Green low beam and parking light warning light (≣D⇦)
6) Amber “side stand down” warning light ( )
7) Right multifunction digital display (coolant temperature - clock - battery voltage - chronometer)
8) Red mixer oil reserve warning light LED ( )
9) Green neutral indicator warning light (N)
10) Multifunction computer programming push buttons
11) Left multifunction digital display (speedometer - odometer)

Description	Function
Direction indicator warning light	Blinks when the direction indicators are on.
High beam warning light	Comes on when the headlight is in "high beam" position or when the high beam signalling is operated.
Revolution counter (*rpm*)	Indicates the number of revolutions of the engine per minute. **Never exceed the engine max. speed rate, see p. 45 (RUNNING-IN).**
Programmable red line warning light LED (*max*)	Blinks when the max. rpm set by the user is reached, see p. 20 (RED LINE WARNING LIGHT). It comes on when the engine max. rpm threshold setting is confirmed and whenever the ignition key is rotated to position "○", for about three seconds, see p. 18 (MULTIFUNCTION COMPUTER).
Parking light and low beam warning light	Comes on when the lights are on.
Side stand down warning light	Comes on when the side stand is down.
Mixer oil reserve warning light LED	Comes on, for about 0.5 seconds, whenever the ignition switch is brought to position "○", thus testing the correct operation of the led. If the light does not come on in this phase, contact an **aprilia** Official Dealer. **If the warning light LED comes on during the normal operation of the engine, this means that the mixer oil reserve is being used; in this case, provide for topping up, see p. 33 (MIXER OIL TANK).**
Neutral indicator warning light	Comes on when the gear is in neutral.

Description		Function	
Multifunction digital display (left side)	**Speedometer (km/h - MPH)**	Indicates the instantaneous, average or maximum driving speed according to the presetting, see p. 18 (MULTIFUNCTION COMPUTER).	To alternate the data displayed, see p. 18 (MULTIFUNCTION COMPUTER).
	Odometer (km - mi)	Indicates the partial or total number of kilometres or miles covered.	
Multifunction digital display (right side)	**Coolant temperature (°C / °F)** (🌡)	Indicates the temperature of the coolant in the engine, see p. 18 (MULTIFUNCTION COMPUTER). If a temperature of 115°C÷130°C (239°F÷266°F) is indicated, stop the engine and check the coolant level, see p. 36 (COOLANT). If the writing "LLL" appears, stop the engine and check the coolant level, see p. 36 (COOLANT). ⚠ **If the maximum allowed temperature (130°C - 266 °F) is exceeded, the engine may be seriously damaged.**	
	Clock	Indicates the hour and minutes according to the presetting, see p. 18 (MULTIFUNCTION COMPUTER).	
	Battery voltage (V BATT)	Indicates the battery voltage, see p. 18 (MULTIFUNCTION COMPUTER).	
	Chronometer	Indicates the various timings according to the presetting, see p. 18 (MULTIFUNCTION COMPUTER).	







MULTIFUNCTION COMPUTER

When the ignition key (1) is rotated to position "○", the following warning lights come on on the dashboard:
– red line warning light LED (***max***) (2).
– red mixer oil reserve warning light LED (🛢) (3) - for about 0.5 seconds.

The pointer (4) of the revolution counter shifts to the maximum value (rpm) set by the user.
After about 3 seconds the red line warning light LED (***max***) (2) goes off; the pointer (4) of the revolution counter returns to its initial position. In this way the component operation is tested.

After the first 1000 km (625 mi) and successively every 4000 km (2500 mi), the writing "SERVICE" (5) appears on the right display. In this case contact an aprilia **Official Dealer, who will carry out the operations indicated in the regular service intervals chart, see p. 47 (REGULAR SERVICE INTERVALS CHART).**
To make the writing "SERVICE" disappear, press the "LAP" push button (6) and then the push button R and keep them pressed for about 5 seconds.

With the ignition key (1) in position "○" the standard settings on the dashboard are the following:

Right display: Clock (7), coolant temperature in °C (8).

Left display: Instantaneous speed in km/h (9), trip 1 (trip odometer) (10), total kilometres/miles odometer (11).

Upon installation of the battery or of the 20A fuse:
- The revolution counter pointer (4) makes 12 clockwise clicks, thus checking the operation of the revolution counter itself.
- The instantaneous, maximum and average speed function is set in "**km/h**".
- The digital clock is set to zero.
- The red line is set at 6000 rpm.

If necessary, carry out the appropriate adjustments.

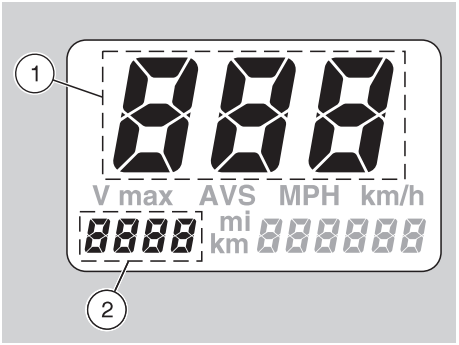
SEGMENT OPERATION CHECK

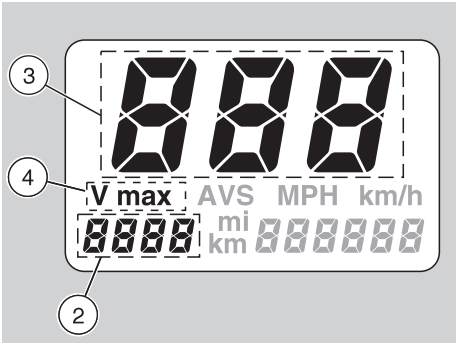
- Press the push buttons **A** and **B** at the same time.
- Rotate the ignition key (1) from position "🔑" to position "○".

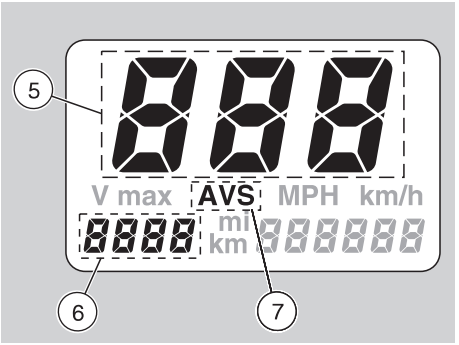
All the segments will remain on until the push buttons **A** and **B** are released.

SWITCHING FROM km TO mi (from km/h to MPH) AND VICEVERSA (LEFT DISPLAY)

- Press the push button **A** until, after about 5 seconds, all the writings (12) on the left display start blinking.
- Release the push button **A**.







- Press the push button **B** to change the unit of measurement from "**km**" to "**mi**" (from "**km**" to "**MPH**") and viceversa.
- To confirm the setting, press the push button **A** for about 5 seconds.

SETTING THE INSTANTANEOUS, MAXIMUM AND AVERAGE SPEED (LEFT DISPLAY)

Two seconds after the vehicle has started moving, the instantaneous speed is automatically shown on the display, even if a different function is set.

When the ignition key is rotated to position "○", the instantaneous speed (1) and the partial number of kilometres/miles covered (trip 1) (2) appear on the left display.
Resetting "trip 1" (2): with the odometer set on the instantaneous speed function, press the push button **R** for about 2 seconds.

- To display the maximum speed (3) and the distance "trip 1" (2), press the push button **B** for about 1 second.
  The writing "**V max**" (4), the maximum speed (3) and the distance "trip 1" (2) are displayed.

Resetting the maximum speed (3): with the odometer set on the "**V max**" function, press the push button **R** for about 2 seconds.

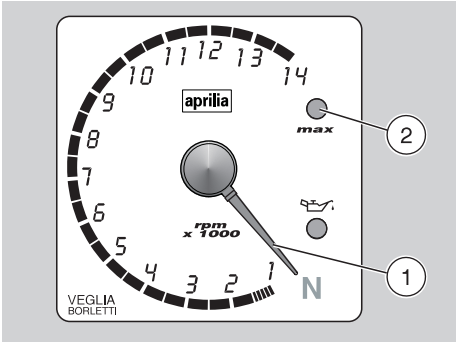
The measurement of the maximum speed is relevant to the distance covered from the last setting to zero fo the maximum speed itself. The distance "trip 1" (2) shown on the display indicates the number of kilometres/miles covered from the last setting to zero.

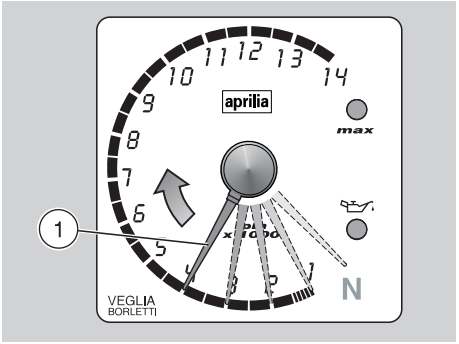
- To display the average speed (5) and the distance "trip 2" (6), press the push button **B** again for about 1 second.
  The writing "**AVS**" (7), the average speed (5) and the distance "trip 2" (6) are displayed.

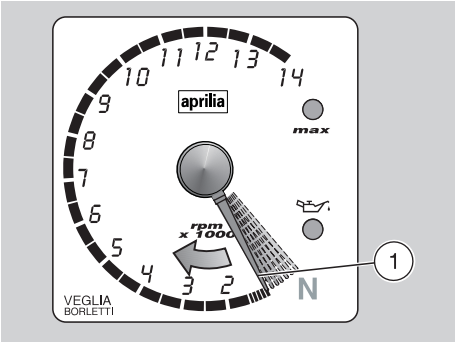
Resetting the average speed (5) and the distance "trip 2" (6): with the odometer set on the "**AVS**" function, press the push button **R** for about 1 second.

The measurement of the average speed is relevant to the distance "trip 2" (odometer).
The distance "trip 2" (6) shown on the display indicates the number of kilometres/miles covered from the last setting to zero.
If more than 1000 km (625 mi) are covered without setting "trip 2" to zero, the value of the average speed will be wrong.

- To display the instantaneous speed (1) and the distance "trip 1" (2), press the push button **B** again.







SETTING THE RED LINE THRESHOLD (WITH ENGINE OFF ONLY)

When the maximum rpm set is exceeded, the red line warning light LED "*max*" (2) positioned on the dashboard starts blinking.

If the push button **C** is pressed for less than one second, the pointer (1) of the revolution counter (1) shifts to the red line value set for 3 seconds, after which it returns to its initial position.

For the setting:

- Press the push button **C**, release it and press it again within 3 seconds. The pointer (1) moves increasing the value by 1000 rpm at each step, as long as **C** is kept pressed; when it has reached the maximum value, it starts again from the beginning.
- Press the push button **C** until the desired rpm value has been set.
- If the push button **C** is released and then pressed again within 3 seconds, intermittently, the pointer (1) moves increasing the value by 100 rpm per pulsation; when it has reached the maximum value, it starts again from the beginning.
- To confirm, release the push button **C**. After 3 seconds, the red line threshold setting is stored.

The setting is confirmed by the coming on of the red line warning light LED "*max*" (2).

MULTIFUNCTION (RIGHT DISPLAY)

The right display (multifunction) includes the coolant temperature in °C (°F) (1) and the digital clock (2) as standard settings.

When the engine is cold, the writing "COLD" blinks.

By pressing the push button **D**, the following functions can be obtained in sequence:

Standard setting: temperature in °C and digital clock

↓ **D**

Battery voltage (V BATT)

↓ **D**

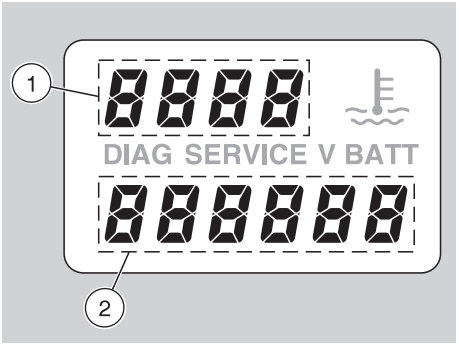
Hour setting

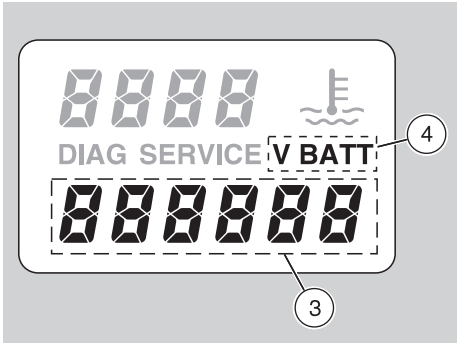
↓ **D**

Minute setting

↓ **D**

°C or °F setting





STANDARD SETTING: COOLANT TEMPERATURE AND DIGITAL CLOCK

The coolant temperature value (1) is shown in the upper part of the right display.

It is possible to switch from °C to °F and viceversa, see p. 22 (SETTING °C OR °F).

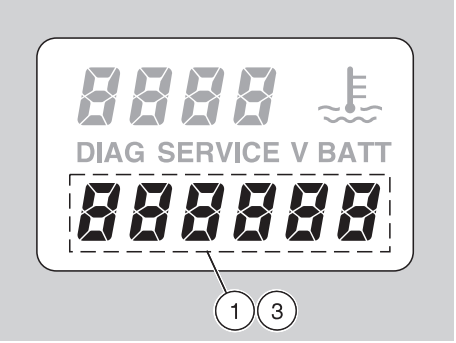
- When the temperature is below 35°C (95°F), the writing "COLD" (1) blinks on the right display.
- When the temperature is over 115°C (239°F), the value (1) blinks on the right display, even if a function different from the standard setting has been set.
- When the temperature is over 130°C (266°F), the writing "LLL" (1) appears on the right display.
- Thermometer range: 0 - 130°C (32 - 266 °F).

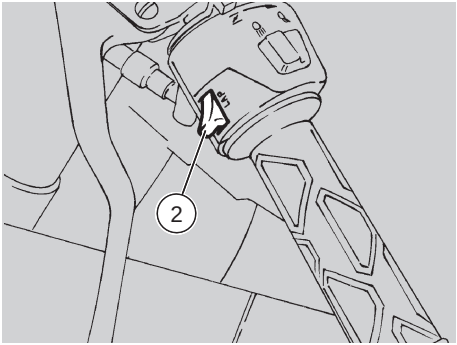
The digital clock (2) appears in the lower part of the right display.

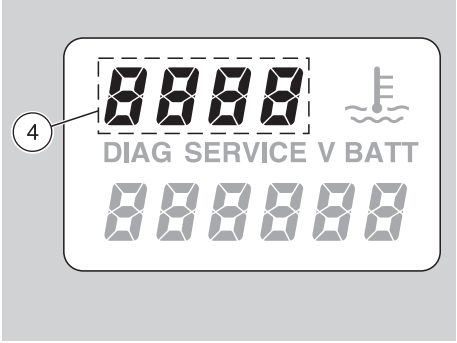
To set or modify hour and minutes, see p. 22 (SETTING THE HOUR) and p. 22 (SETTING THE MINUTES).

BATTERY VOLTAGE - VBATT

- If the push button **D** is pressed once, the battery voltage expressed in volt (3) appears in the lower part of the right display, while the coolant temperature (1) is displayed in the upper part.
  The writing "**V BATT**" (4) is displayed.
  The recharge circuit functions correctly if at 4000 rpm the battery voltage with low beam on is included between 13 and 15 V.







SETTING THE HOUR

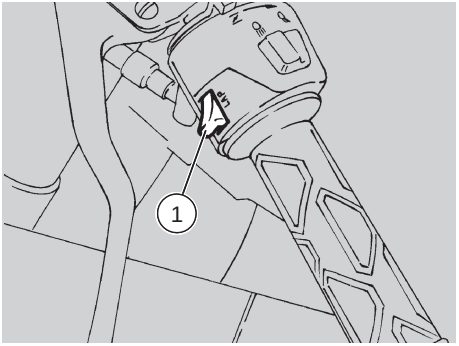
- When the push button **D** is pressed for the second time, the hour segments (1) start blinking in the lower part of the right display (digital clock).
- To modify the hour setting, press the “LAP” push button (2) on the left part of the handlebar.
- To confirm the hour setting, press the push button **D**.

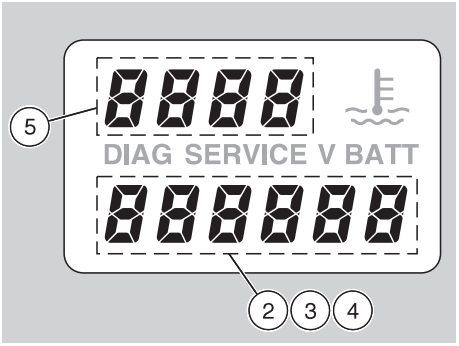
SETTING THE MINUTES

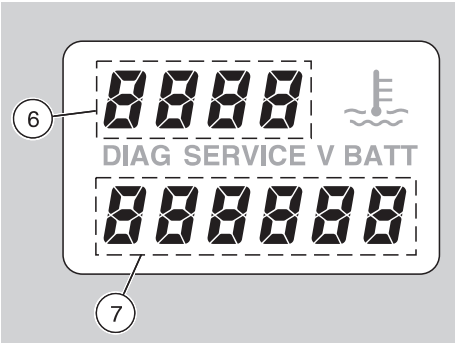
- When the push button **D** is pressed for the third time, the minute segments (3) start blinking in the lower part of the right display (digital clock).
- To modify the minute setting, press the “LAP” push button (2) on the left part of the handlebar.
- To confirm the minute setting, press the push button **D**.

SETTING ˚C OR ˚F

- When the push button **D** is pressed for the fourth time, the segments of the coolant temperature in ˚C or ˚F (4) start blinking in the upper part of the display.
- To modify from ˚C to ˚F setting, or vice versa, press the “LAP” push button (2) on the left part of the handlebar.
- To confirm the setting, press the push button **D**.







CHRONOMETER (RIGHT DISPLAY)

The chronometer makes it possible to measure the time per lap with the vehicle on a racetrack and to store the data, in such a way as to be able to consult them successively.

When the "CHRONOMETER" function has been selected, it is not possible to recall the following functions:

- Maximum speed "**V max**"
- Average speed "**AVS**"
- Distance "trip 2".
- To operate the chronometer, press the "LAP" push button (1) and, within 0.7 seconds, the push button **D**.
- To start timing, press the "LAP" push button (1) and release it immediately.
- To store the time acquired, press the "LAP" push button (1).

The "LAP" push button (1) is not enabled for 10 seconds and the last time stored (2) is shown on the display.

After which, the chronometer with the current timing (3) is displayed, starting from 10 seconds.

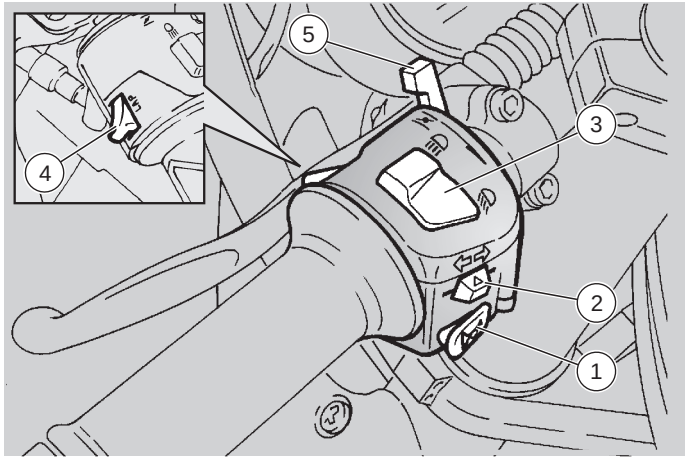
- To display the first time stored (4), press the push button **B**.
- To be able to see the stored times in sequence, press the "LAP" push button (1). The writings L1, L2, L3, L4, etc. (5) are displayed.
- To start timing again, press the push button **B**.

It is possible to store max. 40 times, after which the "LAP" push button (1) is not effective any longer.

- To set the memory to zero, press the push button **A** and the "LAP" push button (1) at the same time for 2 seconds.
- To leave the chronometer function, press the "LAP" push button (1) and the push button **D**.

The coolant temperature (6) and the digital clock (7) appear on the right display (multifunction).

When the engine is cold, the writing "COLD" is displayed.



CONTROLS ON THE LEFT PART OF THE HANDLEBAR

The electrical parts work only when the ignition switch is in position "○".

1) HORN PUSH BUTTON (⌓)
The horn is activated when the push button is pressed.

2) DIRECTION INDICATOR SWITCH (⇦⇨)
To indicate the turn to the left, move the switch to the left; to indicate the turn to the right, move the switch to the right.
To turn off the direction indicator, press the switch.

3) DIMMER SWITCH (≣D - ≣D)
When the light switch is in position "☼", see p. 25 (CONTROLS ON THE RIGHT PART OF THE HANDLEBAR): if the dimmer switch is in position "≣D", the high beam comes on, while if it is in position "≣D", the low beam comes on.

3) DIMMER SWITCH (≣D - ≣D) ASD
When it is in position "≣D" the parking lights, the dashboard light and the low beam are always on.
When it is in position "≣D", the high beam comes on.

4) "LAP" PUSH BUTTON (multifunction)
The following functions can be alternately shown on the right multifunction display by means of this push button:
– hour and minutes;
– coolant temperature (°C or °F);
– chronometer.

For the setting of the functions, see p. 18 (MULTIFUNCTION COMPUTER).

5) COLD START LEVER (⌈)
The starter for the cold start of the engine is operated by rotating the lever "⌈" downwards.
To disconnect the starter, move the lever "⌈" to its initial position.

CONTROLS ON THE RIGHT PART OF THE HANDLEBAR

The electrical parts work only when the ignition switch is in position "○".

1) ENGINE STOP SWITCH (○ - ⊗)

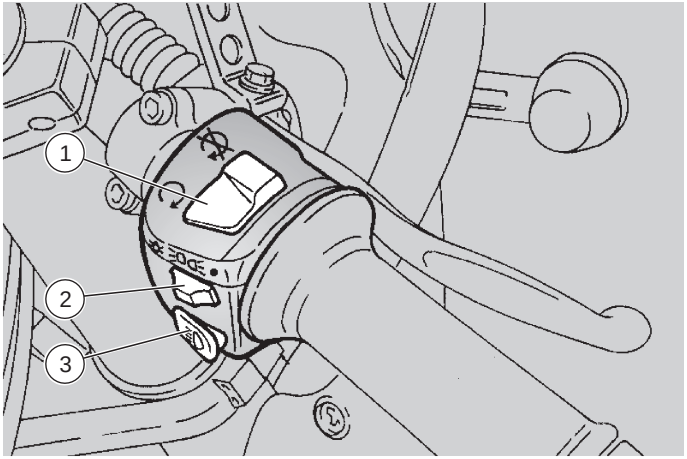
Do not operate the engine stop switch "○ - ⊗" in running conditions.

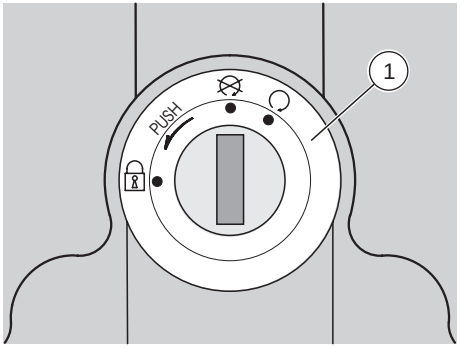
This is a safety or emergency switch.
With the switch in position "○", it is possible to start the engine; the engine can be stopped by moving the switch to position "⊗".

With stopped engine and ignition switch in position "○", the battery may discharge.
When the vehicle has come to rest, after stopping the engine, move the ignition switch to position "⊗".

2) HEADLIGHT SWITCH (☼ - ≡D - •)
(not provided in the ASD version)
When the light switch is in position "•", the lights are off; when the switch is in position "≡D", the parking lights and the dashboard light are on; when the switch is in position "☼", the parking lights, the dashboard light and the low beam are on.
The high beam can be operated by means of the dimmer switch, see p. 24 (CONTROLS ON THE LEFT PART OF THE HANDLEBAR).

3) HIGH BEAM SIGNALLING PUSH BUTTON (≡D)
It makes it possible to use the high beam for signalling to forthcoming vehicles while overtaking and in case of peril and/or emergency.

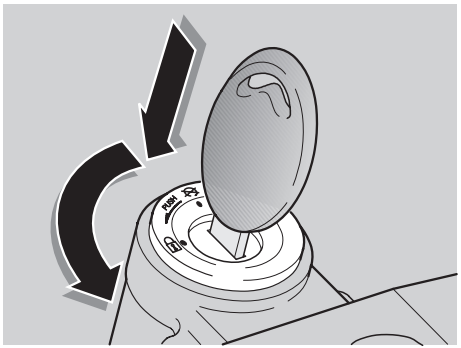




IGNITION SWITCH

The ignition switch (1) is positioned on the upper plate of the steering column.

The key operates the ignition switch/steering lock, the fuel tank lock and the glove/tool kit compartment lock.
Two keys are supplied together with the vehicle (one spare key).



STEERING LOCK

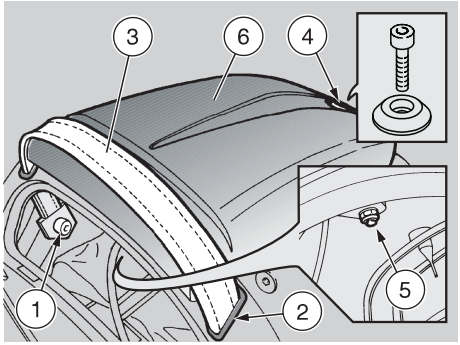
Never turn the key to position "🔒" in running conditions, in order to avoid losing control of the vehicle.

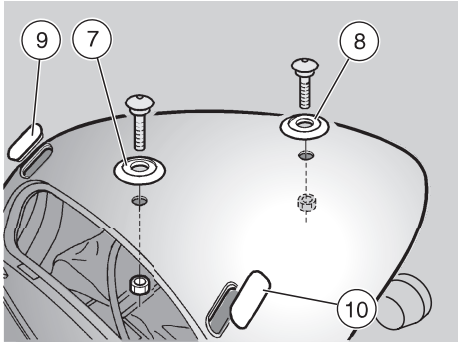
OPERATION

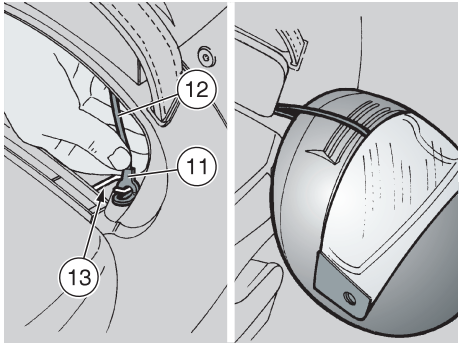
To lock the steering:

- Turn the handlebar completely leftwards.
- Turn the key to position "⊗".
- Press the key and rotate it to position "🔒".
- Extract the key.

Position	Function	Key removal
🔒 Steering lock	The steering is locked. It is neither possible to start the engine, nor to switch on the lights.	It is possible to remove the key.
⊗	Neither the engine, nor the lights can be switched on.	It is possible to remove the key.
○	The engine and the lights can be switched on.	It is not possible to remove the key.







REMOVING THE PASSENGER SEAT

- Remove the glove/tool kit compartment cover, see p. 28 (GLOVE/TOOL KIT COMPARTMENT).
- ★ Unscrew and remove the screw (1).

Screw (1) driving torque:
12 Nm (1.2 kgm)

Do not use any tool (screwdriver, etc.) for the removal and insertion of the grab strap loop (2).

- ★ Withdraw the passenger grab strap (3), push it from the inside of the compartment removing the grab strap loop (2).
- Unscrew and remove the screw (4) and take the bushing and the nut.

Screw (4) driving torque:
7 Nm (0.7 kgm).

- Working inside the compartment, unscrew and remove the nut (5), taking care not to lose it.
- Raise and remove the passenger seat (6).
- Position the plugs (7) and (8) on the rear part of the fairing and fasten them with the suitable screws and the relevant nuts.
- Put the screws (1), the screw (4) with the relevant bushing and nut and the nut (5) in the tool kit envelope.

The inside of the right (9) and left (10) plugs is marked with the codes “DX” (right) or “SX” (left) (assembly side) and “UP” with an arrow (assembly direction).

- Correctly insert the plugs (9) and (10) in the strap passage points.
- Put the passenger seat (6) and the passenger grab strap (3) in the compartment.

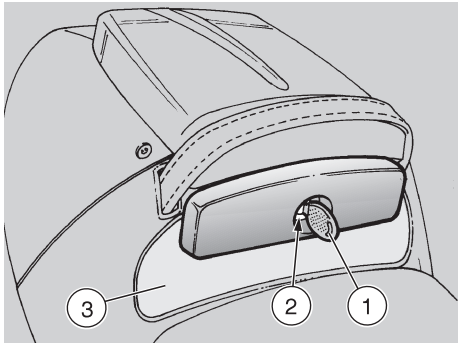
CRASH HELMET HOOK

Thanks to the crash helmet hook, you no longer have to carry the crash helmet with you every time you park the vehicle.

Do not ride with the crash helmet hanging from the hook, as this may seriously compromise your safety.

To hang the crash helmet:

- Remove the glove/tool kit compartment cover, see p. 28 (GLOVE/TOOL KIT COMPARTMENT).
- Withdraw the eyelet (11) of the cable (12) from the hook (13).
- Pass the cable (12) through the visor opening or through the apposite loop on the crash helmet.
- Insert the eyelet (11) completely in the hook (13).
- Put back the cover and lock it.



GLOVE/TOOL KIT COMPARTMENT

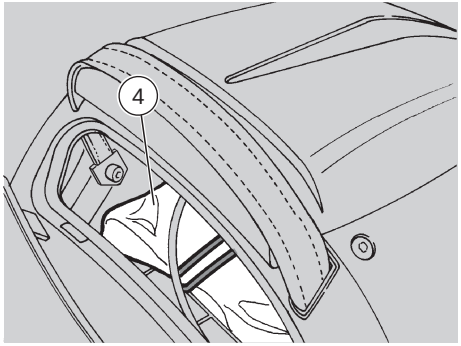
The glove/tool kit compartment is positioned under the passenger seat; to reach it:

- Position the vehicle on the stand, see p. 46 (POSITIONING THE VEHICLE ON THE STAND).
- Insert the key (1) in the lock (2).
- Rotate the key (1) clockwise.
- Remove the compartment cover (3).

The tool kit (4) includes:

– 3, 4, 5, 6 mm Allen spanners
– 8-10 mm double fork spanner
– 11-13 mm double fork spanner
– 6-7 mm double socket spanner
– 21 mm spark plug socket spanner
– Cross-/cut-headed screwdriver
– Tool case

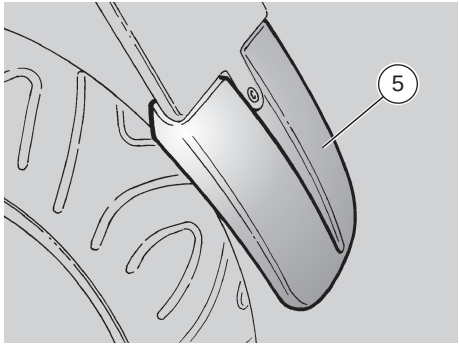
Max. allowed weight: 1.5 kg



SPECIAL TOOLS OPT

To perform some specific operations, it is advisable to use the following special tools (to be requested to an **aprilia** Official Dealer):

Tool	Operations	Page
Rear support stand	Transmission oil change. Rear wheel disassembly. Drive chain adjustment.	49 52 54
Front support stand.	Front wheel disassembly.	50
Square prong spanner.	Adjustment of the rear shock absorber ring nut.	64
Spanner to adjust the shock absorber axis distance	Adjustment of the shock absorber axis distance.	–



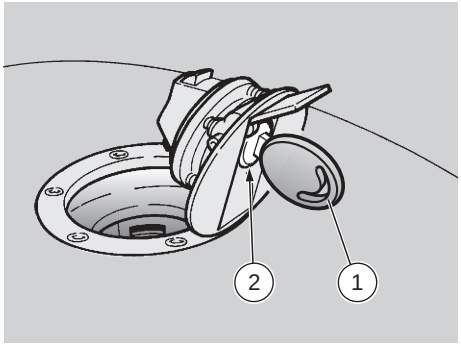
REAR MUDGUARD EXTENSION OPT

The extension of the rear mudguard (5) is extremely useful when the road surface is wet, in fact it reduces the reach of the water spray caused by the rear wheel.

The rear mudguard extension (5) is supplied as standard component in the countries where this is required for the homologation.

FUEL

The fuel used for internal combustion engines is extremely inflammable and in particular conditions it can become explosive. It is important to carry out the refuelling and the maintenance operations in a well-ventilated area, with the engine off. Do not smoke while refuelling or near fuel vapours, in any case avoid any contact with naked flames, sparks and any other heat source to prevent the fuel from catching fire or from exploding. Further, prevent fuel from flowing out of the fuel filler, as it could catch fire when getting in contact with the red-hot surfaces of the engine.
In case some fuel has accidentally been spilt, make sure that the area has completely dried and before starting the vehicle verify that there is no fuel inside the fuel filler neck.
Since petrol expands under the heat of the sun and due to the effects of sun radiation, never fill the tank to the brim. Screw the plug up carefully after refuelling. Avoid any contact of the fuel with the skin and the inhalation of vapours; do not swallow fuel or pour it from a receptacle into another by means of a tube.



DO NOT DISPOSE OF FUEL IN THE ENVIRONMENT.

KEEP AWAY FROM CHILDREN

Use only premium grade unleaded petrol, in conformity with the DIN 51607 standard, min. O.N. 95 (N.O.R.M.) and 85 (N.O.M.M.).

FUEL TANK CAPACITY (reserve included): 19.5 l

TANK RESERVE: 3.6 l (mechanical reserve)

To refuel, proceed as follows:
- Insert the key (1) in the tank plug lock (2).
- Turn the key clockwise, pull and open the fuel flap.

TRANSMISSION OIL

Check the transmission oil level every 4000 km (2500 mi), see p. 50 (CHECKING THE TRANSMISSION OIL LEVEL AND TOPPING UP).
Change the transmission oil after the first 1000 km (625 mi) and successively every 12000 km (7500 mi), see p. 51 (CHANGING THE TRANSMISSION OIL).

Use high-quality 75W-90 oil, see p. 86 (LUBRICANT CHART).

Engine oil can cause serious damage to the skin if handled every day and for long periods. Wash your hands carefully after using the oil.

Do not dispose of the oil in the environment.
Put it in a sealed container and take it to the filling station where you usually buy it or to an oil salvage center.

In case any maintenance operation has to be carried out, it is advisable to use latex gloves.

BRAKE FLUID (recommendations)

This vehicle is provided with front and rear disc brakes, with separate hydraulic circuits.
The following information refers to a single braking system, but is valid for both.

Sudden resistance or clearance problems on the brake lever may be due to troubles in the hydraulic system.
For any doubt regarding the perfect functioning of the braking system and in case you are not able to carry out the usual checking operations, contact your aprilia **Official Dealer.**

Make sure that the brake discs are neither oily nor greasy, especially after maintenance or checking operations.
Check that the brake cables are neither twisted nor worn out.
Prevent water or dust from accidentally getting into the circuit.

In case maintenance operations are to be performed on the hydraulic circuit, it is advisable to use latex gloves.

If the brake fluid gets in contact with the skin or the eyes, it can cause serious irritations.
Carefully wash the parts of your body that get in contact with the liquid.
Consult a doctor or an oculist if the liquid gets in contact with your eyes.

Do not dispose of the brake fluid in the environment.

KEEP AWAY FROM CHILDREN

When using the brake fluid, take care not to spill it on the plastic or painted parts, since it can damage them.

DISC BRAKES

The brakes are the parts that most ensure your safety and for this reason they must always be perfectly working.

The brake fluid must be changed once a year by an aprilia **Official Dealer.**

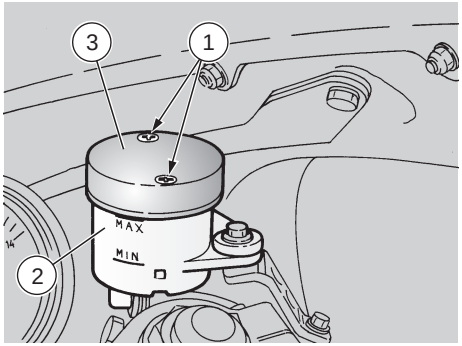
Use brake fluid of the type specified in the lubricant chart, see p. 86 (LUBRICANT CHART).

This vehicle is provided with front and rear hydraulic disc brakes.
When the disc pads wear out, the level of the fluid decreases to automatically compensate for their wear.

The front brake fluid tank is positioned on the right part of the handlebar, near the front brake lever coupling.

The rear brake fluid tank is positioned under the upper part of the fairing, on the right side of the vehicle.

Periodically check the brake fluid level in the tanks, see p. 31 (FRONT BRAKE), p. 32 (REAR BRAKE) and the wear of the pads, see p. 66 (CHECKING THE BRAKE PAD WEAR).

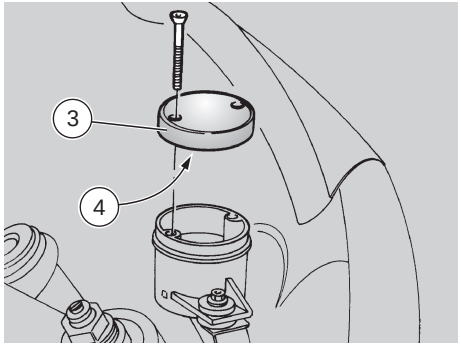


FRONT BRAKE

Checking

Position the vehicle on firm and flat ground.

- Position the vehicle on the stand, see p. 46 (POSITIONING THE VEHICLE ON THE STAND) and rotate the handlebar completely rightwards.
- Make sure that the fluid level exceeds the "**MIN**" mark.
- If the fluid does not reach the "**MIN**" mark, provide for topping up.



Topping up:

The brake fluid may flow out of the tank. Do not operate the front brake lever if the screws (2) are loose or, most important, if the brake fluid tank cover has been removed.

- Unscrew the two screws (1) of the brake fluid tank (2).
- Raise and remove the cover (3) together with the screws and the gasket (4).

In order not to spill the brake fluid while topping up, do not shake the vehicle.

- Fill the tank (2) with brake fluid, see p. 86 (LUBRICANT CHART), until reaching the correct level between the "**MIN**" and "**MAX**" marks.

When topping up, never exceed the "MAX" level.
It is advisable to top up until reaching the "MAX" level only with new pads.

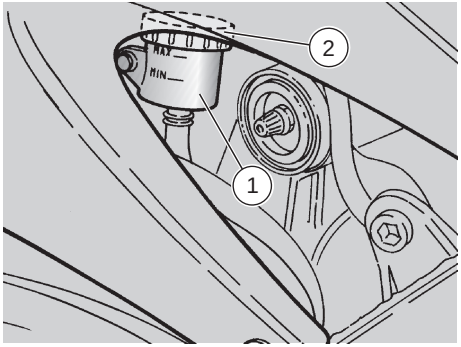
When the disc pads wear out, the level of the fluid decreases progressively to compensate for their wear.

Do not reach the "MAX" level with worn out pads, since this will cause a fluid outflow when the pads are changed.

- To reassemble the components, follow the reverse order.

Check the braking efficiency. If necessary, contact your aprilia **Official Dealer.**

In case of excessive stroke of the brake lever, of excessive elasticity or in case there is air in the circuit, contact your aprilia **Official Dealer, since it may be necessary to bleed the system.**

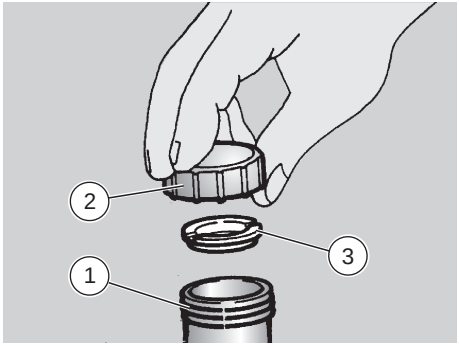


REAR BRAKE

Checking

Position the vehicle on firm and flat ground.

- Keep the vehicle in vertical position, so that the fluid contained in the tank (1) is parallel to the plug (2).
- Make sure that the fluid level exceeds the "**MIN**" mark.
- If the fluid does not reach the "**MIN**" mark, provide for topping up.



Topping up

The brake fluid may flow out of the tank. Do not operate the rear brake lever if the brake fluid tank plug is loose or has been removed.

- Remove the battery, see p. 70 (REMOVING THE BATTERY).
- Working inside the battery compartment, unscrew and remove the plug (2).

In order not to spill the brake fluid while topping up, keep the fluid in the tank parallel to the tank rim (in horizontal position).

- Remove the gasket (3).
- By means of a syringe, fill the brake fluid tank (1), see p. 86 (LUBRICANT CHART) until reaching **the correct level between the "MIN" and "MAX"** marks.

It is advisable to top up until reaching the "MAX" level only with new pads.
When the disc pads wear out, the level of the fluid decreases progressively to compensate for their wear.
Do not reach the "MAX" level with worn out pads, since this will cause a fluid outflow when the pads are changed.

- To reassemble the components, follow the reverse order.

Check the braking efficiency. If necessary, contact your aprilia **Official Dealer.**

In case of excessive stroke of the brake lever, of excessive elasticity or in case there is air in the circuit, contact your aprilia **Official Dealer, since it may be necessary to bleed the system.**

MIXER OIL TANK

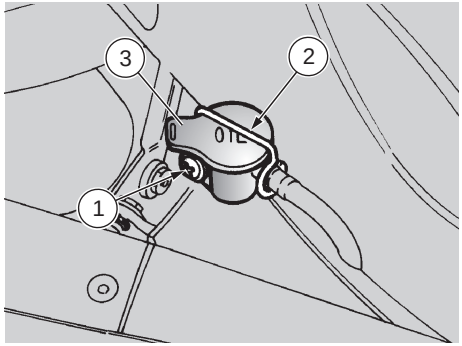
The vehicle is provided with a separate mixer that ensures the mixing of petrol and oil for the engine lubrication, see p. 86 (LUBRICANT CHART).

The mixer oil reserve is indicated by the coming on of the mixer oil reserve warning light LED "⛽" positioned on the dashboard, see p. 16 (INSTRUMENTS AND INDICATORS TABLE).

Check the mixer oil level every 500 km (312 mi).
The use of the vehicle without mixer oil seriously damages the engine.

If you run out of oil in the mixer oil tank or if the mixer oil pipe has been removed, contact an aprilia **Official Dealer, who will provide for bleeding the system.**

This operation is indispensable, since the running of the engine with air in the mixer oil system may result in serious damage to the engine.



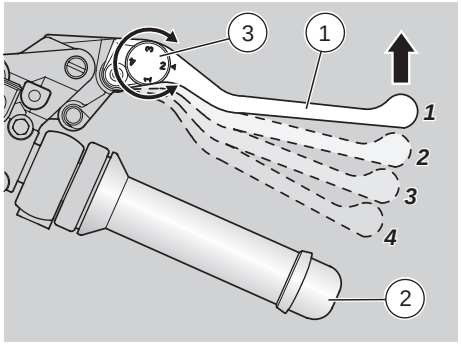
To introduce the mixer oil in the tank, proceed as follows:

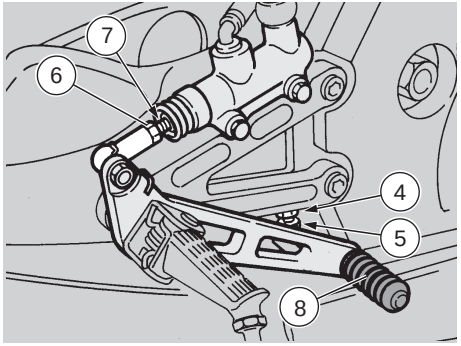
- Unscrew and remove the screw (1).
- Remove the clip (2).
- Remove the plug (3).

TANK CAPACITY: 1.6 l
TANK RESERVE: 0.3 l

Carefully wash your hands after handling the oil.
Do not dispose of the mixer oil in the environment.

KEEP AWAY FROM CHILDREN.





ADJUSTING THE FRONT BRAKE CONTROL LEVER

It is possible to adjust the distance between the lever (1) end and the grip (2), by rotating the adjuster (3).

The positions "**1**" and "**4**" correspond to an approximate distance of 136 and 103 mm, respectively, between the lever end and the grip.

The positions "**2**" and "**3**" correspond to intermediate distances.

- Push the control lever (1) forward and rotate the adjuster (3) until the desired number coincides with the reference arrow.

ADJUSTING THE REAR BRAKE

The brake pedal is positioned ergonomically during the assembly of the vehicle.
If necessary, it is possible to adjust the height of the brake pedal:

- Loosen the lock nut (4).
- Unscrew the brake adjuster (5) completely.
- Screw the lock nut (6) completely on the pump control rod (7).
- Screw the pump control rod (7) completely, then unscrew it by giving 3-4 turns.
- Screw the brake adjuster (5) until the brake pedal (8) reaches the desired height.
- Lock the brake adjuster (5) by means of the lock nut (4).
- Unscrew the pump control rod (7) and bring it in contact with the pump piston.
- Screw the rod in order to ensure a minimum clearance of 0.5÷1 mm between the pump control rod (7) and the pump piston.

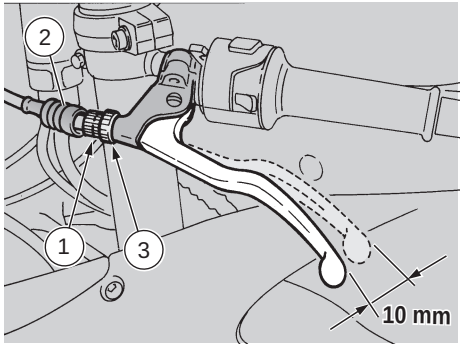
Make sure that there is a certain clearance between the brake adjuster (5) and the point of contact, to prevent the brake from remaining operated and the consequent untimely wear of the braking elements.

Clearance between brake adjuster and point of contact: 0.5 ÷ 1 mm.

- Lock the pump control rod by means of the lock nut (6).

Check the braking efficiency.
If necessary, contact an aprilia **Official Dealer.**

After the adjustment, make sure that the wheel rotates freely with released brake.

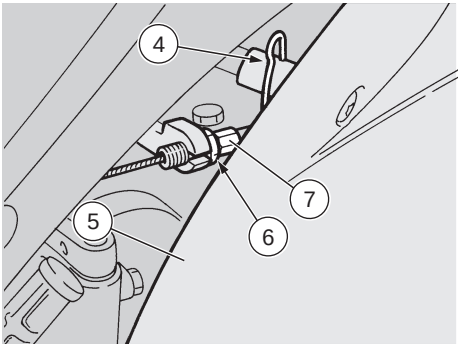


ADJUSTING THE CLUTCH

Adjust the clutch and if the engine stops or tends to advance when the clutch lever is pulled and the gears are engaged, or if the clutch slips causing a delay in the acceleration in comparison with the engine speed.

Minor adjustments can be carried out by means of the adjuster (1):

- Withdraw the protection element (2).
- Loosen the lock nut (3).
- Rotate the adjuster (1) until the idle stroke at the end of the clutch lever is about 10 mm (see figure).
- Tighten the lock nut (3) and check the adjustment again.



If the adjuster is completely screwed or unscrewed, or if it is not possible to obtain the correct idle stroke:

- Withdraw the protection element (2).
- Loosen the lock nut (3) and tighten the adjuster (1) completely.
- Tighten the lock nut (3).
- Remove the split pin (4).
- Move the right fairing (5) slightly outwards.
- Loosen the lock nut at the lower end of the clutch cable (6), on the right side of the engine.
- Rotate the adjuster (7) in such a way as to obtain the prescribed idle stroke.
- Tighten the lock nut (6) and check the adjustment again.
- Put back the fairing (5).
- Insert the split pin (4).
- Start the engine, see p. 40 (STARTING).
- Operate the clutch completely and and engage the 1st gear.

  Make sure that the engine does not stop, that the vehicle does not tend to advance or that the clutch does not slip during the acceleration phase or while the vehicle is running.

If it is not possible to obtain a correct adjustment or if the clutch does not function properly, contact your aprilia **Official Dealer.**

Make sure that the clutch cable is intact: it must not present flattened parts and the sheath must not be worn out in any point.

- Periodically lubricate the clutch cable with a suitable lubricant, see p. 86 (LUBRICANT CHART), in order to avoid its untimely wear and corrosion.

COOLANT

Do not use the vehicle if the coolant is below the minimum prescribed level.

Check the coolant level every 2000 km (1250 mi) and after long rides; change it every 24 months.

The coolant is noxious: do not swallow it; if the coolant gets in contact with the skin or the eyes, it can cause serious irritations.

If the coolant gets in contact with your skin or eyes, rinse with plenty of water and consult a doctor. If it is swallowed, induce vomit, rinse mouth and throat with plenty of water and consult a doctor without delay.

KEEP AWAY FROM CHILDREN.

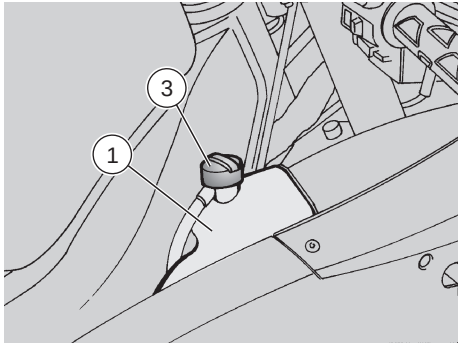
Be careful not to spill the coolant on the red-hot parts of the engine: it may catch fire and send out invisible flames.

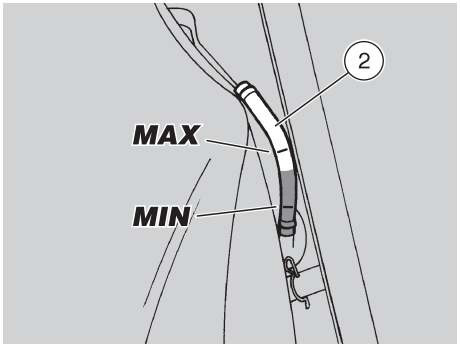
In case maintenance operations are to be performed, it is advisable to use latex gloves.

Have the coolant changed by an aprilia **Official Dealer.**

The coolant is made up of 50% water and 50% antifreeze.
This mixture is ideal for most running temperatures and ensures good protection against corrosion.
Ii is advisable to keep the same mixture also in the hot season, since in this way losses due to evaporation are reduced and it is not necessary to top up very frequently.
The mineral salt deposits left in the radiator by evaporated water are thus reduced and the efficiency of the cooling system remains unchanged.
If the outdoor temperature is below 0°, check the cooling circuit frequently and if necessary increase the antifreeze concentration (up to maximum 60%).
For the cooling solution use distilled water, in order not to damage the engine.

Do not remove the expansion tank cap when the engine is hot, since the coolant is under pressure and its temperature is high.





Checking and topping up

Check the coolant level and top up the expansion tank with cold engine.

- Stop the engine and wait until it has cooled down.

Position the vehicle on firm and flat ground.

- Keep the vehicle in vertical position, with the two wheels resting on the ground.
- Make sure that the coolant level in the expansion tank (1) is included between the **"MIN"** and **"MAX"** marks stamped on the transparent pipe (2) (see figure).
- If not, unscrew and remove the filling plug (3).
- Top up with coolant, see p. 86 (LUBRICANT CHART), until the coolant level is included between the **"MIN"** and **"MAX"** marks stamped on the transparent pipe (2).
  Do not exceed this level, otherwise the fluid will flow out of the tank when the engine is running.
- Put back the filling plug (3).

In case of excessive consumption of coolant and in case the tank remains empty, make sure that there are no leaks in the circuit. Have it repaired by an aprilia **Official Dealer.**

TYRES

This vehicle is provided with tubeless tyres.

Periodically check the tyre inflation pressure at room temperature, see p. 82 (TECHNICAL DATA).

If the tyres are hot, the measurement is not correct.
Carry out the measurement especially before and after long rides.

If the inflation pressure is too high, the ground unevenness cannot be dampened and is therefore transmitted to the handlebar, thus compromising the driving comfort and reducing the road holding during turns.

If, on the contrary, the inflation pressure is too low, the tyre sides are under greater stress and the tyre itself may slip on the rim or it may become loose, with consequent loss of control of the vehicle.

In case of sudden braking the tyres could even get out of the rims. Further, the vehicle could skid while turning.

Check the surface and the wear of the tyres, since tyres in bad conditions can impair both the grip and the controllability of the vehicle.

Change the tyre when it is worn out or in case of puncture on the tread side, if the puncture is larger than 5 mm.
After repairing a tyre, have the wheels balanced. Use only tyres in the size suggested by aprilia, see p. 82 (TECHNICAL DATA).

Make sure that the tyres always have their valve sealing caps on, to prevent them from suddenly going flat.

Change, repair, maintenance and balancing operations are very important and should be carried out by qualified technicians with appropriate tools.

For this reason, it is advisable to have the above mentioned operations carried out by an aprilia **Official Dealer or by a qualified tyre repairer.**

If the tyres are new, they may still be covered with a slippery film: drive carefully for the first miles. Do not oil the tyres with unsuitable fluids.
If the tyres are old, even if not completely worn out, they may become hard and may not ensure good road holding.
In this case, replace them.

MINIMUM TREAD DEPTH LIMIT

front: ..... 2 mm
rear: ..... 2 mm

CATALYTIC SILENCERS
(for the catalytic version only)

Avoid parking the vehicle-catalytic version near dry brush wood or in places easily accessible to children, as the catalytic silencer becomes extremely hot during use; be very careful and avoid any kind of contact before it has completely cooled down.

The catalytic vehicle is fitted with two silencers with metal catalytic converter of the "platinum-rhodium bivalent" type.
This device provides for the oxidation of the CO (carbon monoxide) and of the HC (unburned hydrocarbons) contained in the exhaust gases, changing them into carbon dioxide and steam, respectively.

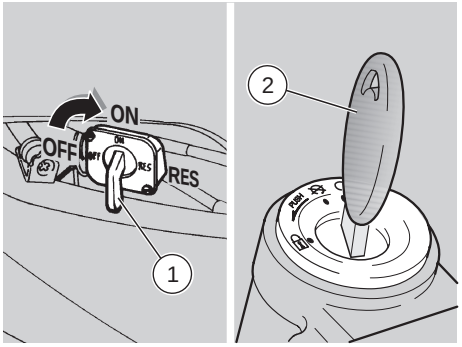
Do not use leaded petrol, since it causes the destruction of the catalytic converter.

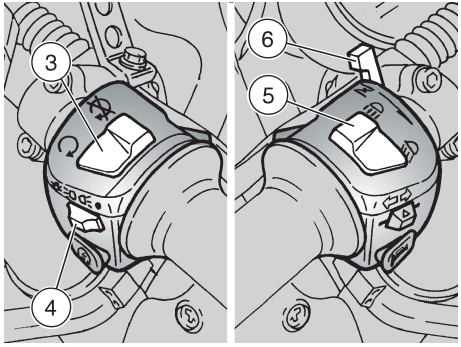
Before departure, always carry out a preliminary checking of the vehicle to make sure that it functions correctly and safely, see the following table (PRELIMINARY CHECKING OPERATIONS). The non-performance of these checking operations can cause severe personal injuries or damages to the vehicle.

Do not hesitate to consult your aprilia **Official Dealer in case there is something you do not understand about the functioning of some controls or in case you suspect or discover some irregularities.**
It does not take long to carry out a check-up and this operation ensures you much more safety.

PRELIMINARY CHECKING OPERATIONS

Component	Check	Page
Front and rear disc brakes	Check the functioning, the idle stroke of the control levers, the fluid level and make sure there are no leaks. Check the wear of the pads. If necessary, top up the fluid tank.	30-31-32-66
Accelerator	Make sure that it works smoothly and that it is possible to open and close it completely, in all steering positions. If necessary, adjust and/or lubricate it.	67
Mixer oil/ transmission oil	Check and/or top up if necessary.	33-50-51
Wheel/tyres	Check the tyre surface, the inflation pressure, wear and tear and any damage.	38
Brake levers	Make sure that they work smoothly. If necessary, lubricate the articulations and adjust the stroke.	34
Clutch	The idle stroke at the end of the clutch lever must be about 10 mm; the clutch must operate without jerking and/or slipping.	35
Side stand and center stand	Make sure that it works smoothly and that the spring tension brings it back to its normal position. If necessary, lubricate joints and hinges. Make sure that the safety switch on the side stand operates correctly.	73-74
Fastening elements	Make sure that the fastening elements are not loose. If necessary, adjust or tighten them.	—
Drive chain	Check the slack.	56-57
Fuel tank	Check the fuel level and top up, if necessary. Make sure there are no leaks or air bubbles in the circuit.	29-59-79
Coolant	The coolant level in the expansion tank must be included between the "**MIN**" and "**MAX**" marks.	36-37
Lights, warning lights, horn and electric devices	Check the proper functioning of the acoustic and visual devices. Change the bulbs or intervene in case of failure.	69÷78





STARTING

Exhaust gases contain carbon monoxide, which is extremely noxious if inhaled.
Avoid starting the engine in closed or badly-ventilated rooms.
The non-observance of this warning may cause loss of consciousness or even lead to death by asphyxia.

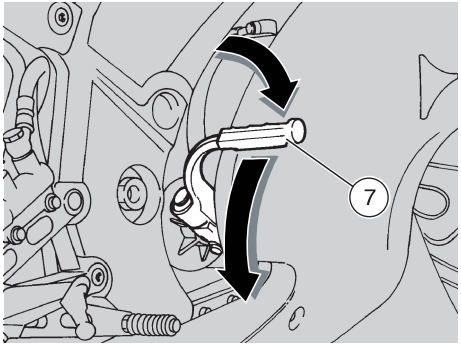
With the side stand down, the engine can be started only if the gears are in neutral; in this case, if you try to engage the gears, the engine stops.
With the side stand up, it is possible to start the engine either in neutral gear or with engaged gears and pulled in clutch lever.

- Let the stand up.
- Get on the vehicle.
- Move the fuel tap lever (1) to position "**ON**".
- Rotate the key (2) and move the ignition switch to position "○".
  At this point on the dashboard:
  – the red mixer oil reserve warning light LED "🛢" comes on on the dashboard;
  – the red line warning light LED "***max***" comes on for about three seconds and the revolution counter pointer shifts to the preset red line threshold.

It is possible to set the unit of measurement of the speedometer (km or mi) and of the coolant temperature (˚C or ˚F), the red line threshold, the clock functions and if necessary the chronometer, see p. 18 (MULTIFUNCTION COMPUTER).

At the beginning, set the red line threshold at a low value. Increase the threshold gradually as you get acquainted with the vehicle. During running-in, never exceed the maximum rpm recommended, see p. 45 (RUNNING-IN).

- Lock at least one wheel, by pulling a brake lever.
- Position the shifting lever in neutral (green warning light "N" on).
- Move the engine stop switch (3) to position "○".
- Make sure that the light switch (4) is in position "•".
- ASD Make sure that the dimmer switch (5) is in position "≡D".
- If the vehicle is started with cold engine, rotate the cold start lever "|↘|" (6) downwards.



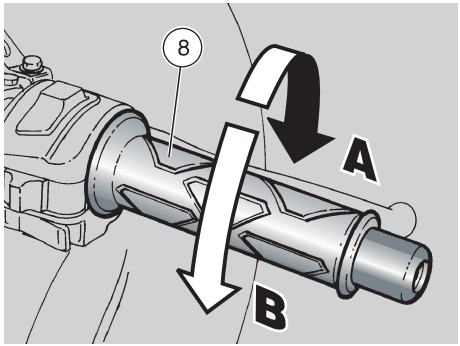
- Rotate the start pedal (7) outwards.
- Press the start pedal (7) without accelerating.

As soon as the engine has started, the red mixer oil reserve warning light LED "" must go out. If this does not occur, or if the warning light comes on while the engine is running, top up the mixer oil tank, see p. 33 (MIXER OIL TANK).

- Keep at least one brake lever pulled and do not accelerate until you start.

Never leave abruptly with cold engine.
To reduce the emission of polluting substances and the consumption of fuel, warm the engine up by proceeding at low speed for the first miles.

- Rotate the cold start lever "|↘|" (6) upwards after the engine has warmed up.



Starting with flooded engine.

If the starting is not carried out properly or if there is too much fuel in the intake ducts and in the carburettor, the engine may get flooded.

To clean a flooded engine:

- Carry out the first nine operations described for the starting procedure.
- Rotate the cold start lever "|↘|" (6) upwards.
- Press the start pedal (7) with energy for a few times (letting the engine spin over) with completely open throttle (8) (**Pos. B**).

Starting with cold engine.

When the room temperature is low (about 0 ˚C / 32 ˚F), it may be difficult to start the engine at the first attempt.

In this case:

- Rotate the cold start lever "|↘|" (6) downwards.
- Press the start pedal (7) with energy for a few times and at the same time rotate the throttle grip (8) slightly.

If the engine starts.

- Release the throttle grip (8).
- Rotate the cold start lever "|↘|" (6) upwards.
  If the idling is unstable, twist the throttle grip (8) slightly and frequently.

If the engine does not start.

Wait for a few seconds and then repeat the starting procedure.

STARTING AFTER A LONG PERIOD OF INACTIVITY

After a long period of inactivity, push the start pedal (7) with energy for a few times without accelerating, in order to ensure the filling of the fuel circuit.

To start the engine, slightly open the throttle and carry out the starting procedure.

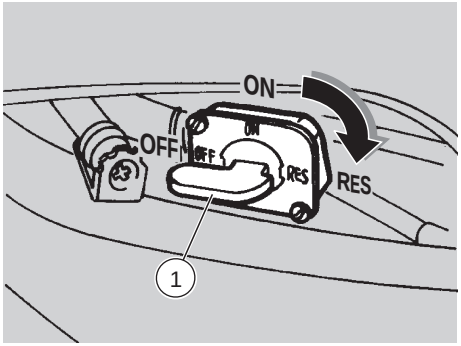
This vehicle is considerably powerful and must be used gradually and with the greatest care.
Do not place objects behind the front part of the fairing.

Before departure, carefully read the "SAFE DRIVE" chapter, see p. 5 (SAFE DRIVE).
If you run out of the "standard" fuel quantity while riding, move the fuel tap lever (1) to position "RES", in order to use the fuel reserve.
Fuel reserve: 3.6 l (mechanical reserve).

If you drive without passenger, make sure that the passenger footrests are folded.
While riding, keep your hands on the grips and your feet on the footrests.

NEVER RIDE IN ANY POSITION OTHER THAN THOSE INDICATED.

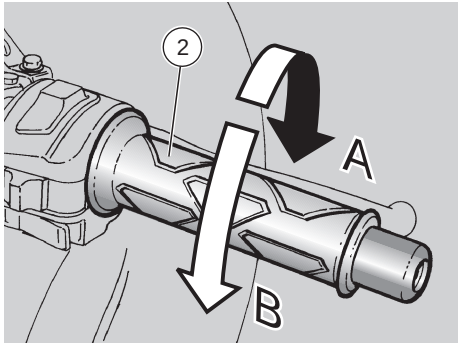
If you drive with a passenger, instruct him/her so that he/she does not create problems during manouvres.



To leave:
- Adjust the inclination of the rear-view mirrors correctly.

With the vehicle at rest, try to get acquainted with the use of the rear-view mirrors. The reflecting surface is convex, therefore the objects seem to be farther away than they actually are. These mirrors offer a "wide-angle" view and only experience will allow you to evaluate the distance of the following vehicles correctly.

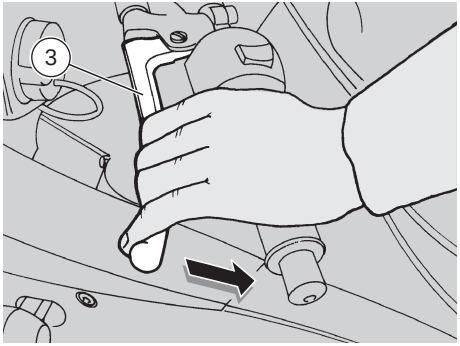
- Ride at reduced speed for the first miles, in order to warm the engine up.

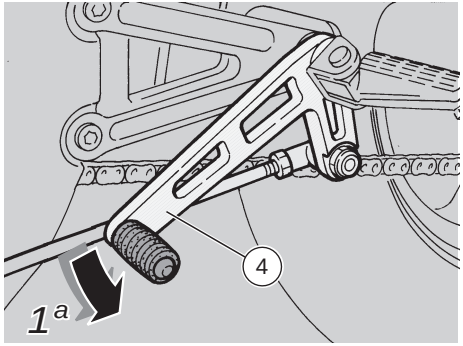


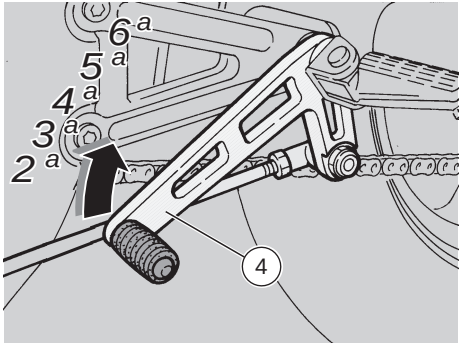
- With released throttle grip (2) (**Pos. A**) and engine idling, pull the clutch lever (3) completely.
- Engage the first gear, by pressing the shifting lever (4) downwards.
- Release the brake lever (pulled on the starting).

On departure, the abrupt release of the clutch lever may cause the engine to stall or the vehicle to jerk forwards.

Never accelerate abruptly or excessively when releasing the clutch lever, in order to prevent the clutch from "slipping" (slow release) or the front wheel from raising (rearing up) (quick release).







- Slowly release the clutch lever (3) and at the same time accelerate by rotating the throttle grip moderately (2) (**Pos. B**). The vehicle will start moving.

Never exceed the recommended rpm, see p. 45 (RUNNING-IN).

- Increase the speed by gradually rotating the throttle grip (2) (**Pos. B**), without exceeding the recommended rpm, see p. 45 (RUNNING-IN).

To engage the second gear:

Proceed quickly.
Never ride the vehicle at too low rpm.

- Release the throttle grip (2) (**Pos. A**), pull the clutch lever (3) and lift the shifting lever (4). Release the clutch lever (3) and accelerate.
- Repeat the last two operations and shift up.

If the mixer oil reserve warning light LED "" comes on while the engine is running, this means that the mixer oil reserve is being used; in this case, top up the mixer oil tank, see p. 33 (MIXER OIL TANK).

The downshifting should be carried out in the following situations:

- When riding downhill or when braking, in order to increase the braking action by using the compression of the engine.
- When riding uphill, if the gear engaged is not suitable to the speed (high gear, moderate speed) and the engine rpm decreases.

Shift the gears one by one; the simultaneous downshifting of more than one gear may make you exceed the maximum rpm (red line). Before and during the downshifting, release the throttle grip and decelerate, in order to avoid the "red line".

To shift down, proceed as follows:

- Release the throttle grip (2) (**Pos. A**).
- If necessary, pull the brake levers moderately and decrease the speed of the vehicle.
- Pull the clutch lever (3) and lower the shifting lever (4) to shift down.
- If the brake levers are pulled, release them.
- Release the clutch lever and accelerate moderately.

If the writing "LLL" appears on the right side of the multifunction display, stop the engine and check the coolant level, see p. 36 (COOLANT).

Avoid opening and closing the throttle grip repeatedly and continuously, so that you do not accidentally lose control of the vehicle.
If you have to brake, close the throttle and put on both brakes in order to obtain uniform deceleration, properly exerting pressure on the braking parts.

By putting on the front brake only or the rear brake only, you reduce the braking force considerably, thus running the risk of locking one wheel and consequently losing grip.
If you stop uphill, decelerate completely and use the brakes only to keep the vehicle steady.
The use of the engine to keep the vehicle steady may cause the overheating of the clutch.

Before beginning to turn, slow down or brake driving at moderate and constant speed or accelerating slightly; avoid braking at the last moment: it would be very easy to skid.

If the brakes are operated continuously on downhill stretches, the friction surfaces may overheat, thus reducing the braking efficiency.
Exploit the engine compression and shift down by putting on both brakes intermittently.
Never drive downhill with the engine off!

When visibility is insufficient, switch on the low beam even during the day, in order to make your vehicle more visible.
In case of wet ground or scarce wheel grip (snow, ice, mud, etc.), drive slowly, avoiding sudden brakings or manoeuvres that could make you lose grip and fall down.

Pay the utmost attention to any obstacle or variation of the ground. Uneven roads, rails, manhole covers, indications painted on the road surface, building site metal plates become rather slippery by rain. For this reason all these obstacles have to be carefully avoided, driving smoothly and bending the vehicle as little as possible.

Always use the turn indicators in time when you intend to change lane or direction, avoiding sharp and dangerous movements.
Switch off the direction indicators as soon as you have changed direction.

Be extremely careful when you overtake other vehicles or are overtaken.

In case of rain, the water cloud created by big vehicles reduces visibility; the air shift may make you lose control of the vehicle.

RUNNING-IN

The running-in of the engine is important to ensure its correct functioning.
If possible, drive on hilly roads and/or roads with many bends, so that the engine, the suspensions and the brakes undergo a more effective running-in.
During running-in, change speed. In this way the components are first ìloadedî and then ìrelievedî and the engine parts can thus cool down. Even if it is important to stress the engine components during running-in, take care not to exceed.

Only after the first 1500 km (937 mi) of running-in you can expect the best performance levels from the vehicle.

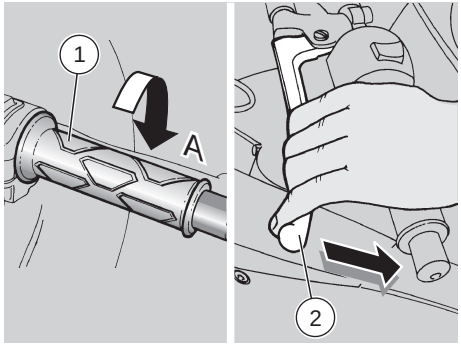
Keep to the following indications:

- Do not open the throttle completely if the speed is low, both during and after the running-in.
- During the first 100 km (62 mi) put on the brakes with caution, avoiding sharp and prolonged brakings.
  This ensures a correct bedding-in of the pads on the brake disc.
- During the first 800 km (500 mi) never exceed 6000 rpm.

After the first 1000 km (625 mi) , carry out the checking operations indicated in the column "After running-in" of the REGULAR SERVICE INTERVALS CHART, see p. 47 (REGULAR SERVICE INTERVALS CHART), in order to avoid hurting yourself or other people and/or damaging the vehicle.

- Between the first 800 (500 mi) and 1600 km (1000 mi) drive more briskly, change speed and use the maximum acceleration only for a few seconds, in order to ensure better coupling of the components; never exceed 9000 rpm (see table).
- After the first 1600 km (1000 mi) you can expect better performance from the engine, however, without exceeding the max 12000 rpm.

Engine maximum rpm for the running-in	
Mileage km (mi)	**Max. (rpm)**
0÷800 (0÷500)	6000
800÷1600 (500÷1000)	9000
over 1600 (1000)	12000



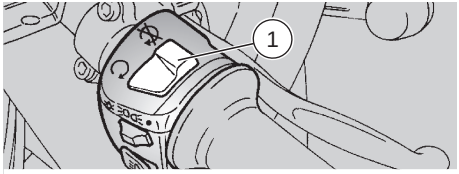
STOPPING

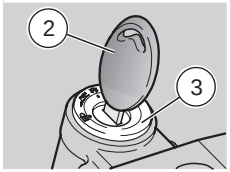
If possible, avoid stopping abruptly, slowing down suddenly and braking at the last moment.

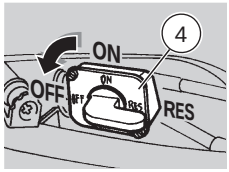
- Release the throttle grip (1) (**Pos. A**), gradually put on the brakes and at the same time shift down in order to decrease the speed, see p. 42 (DEPARTURE AND DRIVE).

Once the speed has decreased, before stopping the vehicle:
- Pull the clutch lever (2) in order to prevent the stopping of the engine.

When the vehicle has come to rest:
- Position the shifting lever in neutral (green warning light "N" on).
- Release the clutch lever.
- In case of a brief stop, keep at least one brake on.



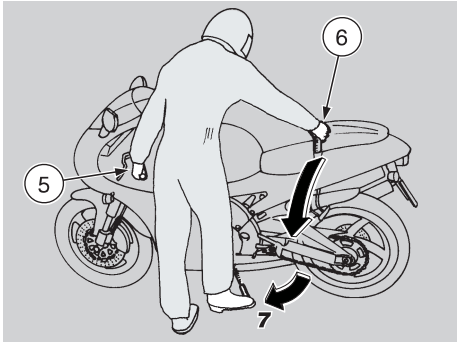




PARKING

Park the vehicle on firm and flat ground, to prevent it from falling down.
Neither lean the vehicle against walls, nor lay it on the ground.
Make sure that the vehicle and especially its red-hot parts do not represent a danger for persons and children. Do not leave the vehicle unattended when the engine is on or the key is inserted into the ignition switch.
Do not sit on the vehicle when the stand is down.

- Stop the vehicle, see p. 45 (STOPPING).
- Move the engine stop switch (1) to position "⊗".
- Rotate the key (2) and move the ignition switch (3) to position "⊗".
- Move the fuel tap lever (4) to position "**OFF**".



- Position the vehicle on the stand, see p. 46 (POSITIONING THE VEHICLE ON THE STAND).

Never leave the key in the ignition switch.

- Lock the steering, see p. 26 (STEERING LOCK) and extract the key.

POSITIONING THE VEHICLE ON THE STAND

- Seize the left grip (5) and the passenger grab strap (6).
- Press the side stand with your right foot and extend it completely (7).
- Incline the vehicle until the stand rests on the ground.
- Steer the handlebar completely leftwards.

Make sure that the vehicle is stable.

SUGGESTIONS TO PREVENT THEFT

NEVER leave the ignition key inserted and always use the steering lock.

Park the vehicle in a safe place, possibly in a garage or a protected place.

When possible, use an additional anti-theft device.

Make sure that all documents are in order and the road tax has been paid.

Write down your personal data and telephone number in this page, to facilitate the identification of the owner in case of finding after theft.

SURNAME: .....

NAME: .....

ADDRESS: .....

.....

TELEPHONE NO.: .....

Very often stolen vehicles are identified thanks to the data written in the use/maintenance manual.

Before beginning any maintenance operation or any inspection of the vehicle, stop the engine, extract the key from the ignition block, wait until the engine and the exhaust system have cooled down and if possible lift the vehicle by means of the proper equipment, on firm and flat ground. Keep away from the red-hot parts of the engine and of the exhaust system, in order to avoid burns.
The vehicle is made up of not edible parts. Never bite, suck, chew or swallow any part of the vehicle for any reason.

If not expressly indicated otherwise, for the reassembly of the units repeat the disassembly operations in reverse order.

Ordinary maintenance operations can usually be carried out by the user, but sometimes a basic knowledge of mechanics and specific tools are required. If you need assistance or technical advice, consult your **aprilia** Official Dealer, who can ensure you prompt and accurate servicing.
After any maintenance operation, carry out the "Preliminary checking operations", see p. 39 (PRELIMINARY CHECKING OPERATIONS).

REGULAR SERVICE INTERVALS CHART

Component	After running-in (1000 km)(625 mi) or 4 months	Every 4000 km (2500 mi) or 8 months	Every 8000 km (5000 mi) or 16 months
Battery - electrolyte level	C	C	
Spark plugs	P	P	every 6000 km (3700 mi):S
Carburettors	C	P	
Drive chain	every 500 km (312 mi): C		
Wheel centering		C	
Steering bearings and steering	C	C	
Wheel bearings		C	
Air cleaner		P	S
Clutch clearance	R	R	
Braking systems	C	C	
Cooling system	C	C	
Light system	C	C	
Brake fluid	C	every year: S	
Mixer oil level	every 500 km (312 mi): C		
Coolant	every 2 years:S		
Fork oil	after the first 4000 km: S/every 4000 km: C		
Transmission oil	S	C	every 12000 km (7500 mi):S
Start lever pin	every 8000 km (5000 mi): C (with water-repellent grease) (*)		
Mixer pump and air bleeding	R		R
Tyre pressure	R	every month: R	
Engine idling rpm	R	R	
Fuel cock	C	C	
Nut, bolt, screw tightening	C	C	
Suspensions and attitude	C		C
Drive chain tension and lubrication	every 500 km (312 mi):C		
Fuel pipes		C	every 4 years: S
Pistons and linings	every 8000 km (5000 mi): C / every 16000 km (10000 mi):S		
Exhaust silencers (catalytic version excluded)	P	P	

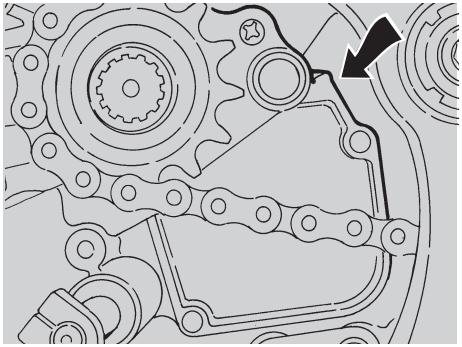
C = check, clean, adjust, lubricate or change, if necessary. **P** = clean; **S** = change; **R** = adjust.
Carry out the maintenance operations more frequently if you use the vehicle in rainy and dusty areas or on uneven ground. Have maintenance operations on the components indicated by carried out by aprilia Official Dealers ONLY.
(*) Use MOLYCOTE 6 Rapidplus grease.

IDENTIFICATION DATA

It is a good rule to write down the frame and engine numbers in the space provided in this manual.

The frame number can be used for the purchase of spare parts.

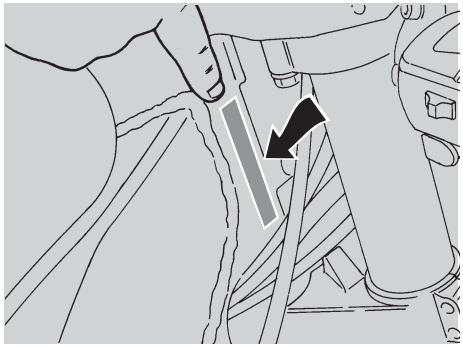
Do not alter the identification numbers if you do not want to incur severe penal and administrative sanctions. In particular, the alteration of the frame number results in the immediate invalidity of the guarantee.



ENGINE NUMBER

The engine number is stamped on the rear part of the engine, near the pinion.

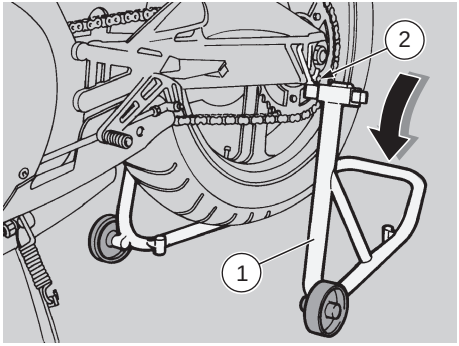
Engine no. _____



FRAME NUMBER

The frame number is stamped on the right side of the steering column.

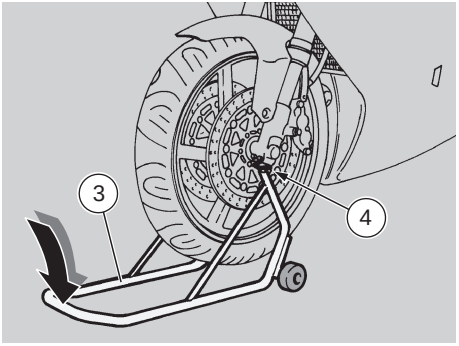
Frame no. _____



POSITIONING THE VEHICLE ON THE REAR SUPPORT STAND OPT

Have someone help you keep the vehicle in vertical position with the two wheels on the ground.

- Make the two housings on the stand (1) coincide with the two pins (2) provided on the vehicle.
- Rest one foot on the rear part of the stand (1).
- Push the stand (1) downwards until it reaches the end of its stroke (see figure).



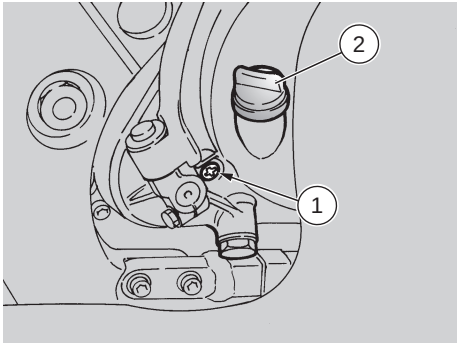
POSITIONING THE VEHICLE ON THE FRONT SUPPORT STAND OPT

- Position the vehicle on the appropriate rear support stand OPT, see p. 49 (POSITIONING THE VEHICLE ON THE REAR SUPPORT STAND OPT).
- Insert the two ends of the stand (3) in the two holes (4) positioned on the lower ends of the front fork.
- Rest one foot on the front part of the stand (3).
- Push the stand (3) downwards until it reaches the end of its stroke (see figure).

CHECKING THE TRANSMISSION OIL LEVEL AND TOPPING UP

Carefully read p. 29 (TRANSMISSION OIL) and p. 47 (MAINTENANCE).

Check the transmission oil level every 4000 km (2500 mi), change it after the first 1000 km (625 mi) and successively every 12000 km (7500 mi), see p. 51 (CHANGING THE TRANSMISSION OIL).



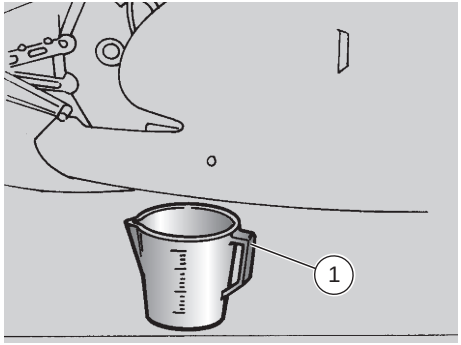
To carry out the checking:

Position the vehicle on firm and flat ground.

- Stop the engine and let it cool down for at least ten minutes, in order to allow the oil to flow back to the oil pan and to cool down.
- Keep the vehicle in vertical position, with the two wheels resting on the ground.

The non-performance of the operations described above may result in a wrong measurement of the level.

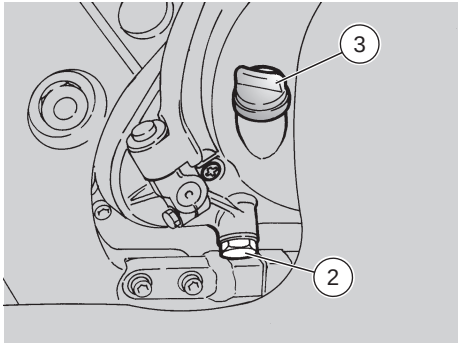
- Position a cloth under the level screw (1) to prevent the oil from flowing out and falling on the exhaust pipes.
- Unscrew and remove the level screw (1) (cross-headed screw) positioned on the right side.
  This screw makes it possible to check if the oil quantity inside the case is sufficient.
- Make sure that the oil flows out of the hole (1), even if slowly; if this does not occur, this means that the oil quantity is insufficient.
- In this case, pour small quantities of oil through the filling hole, after removing the plug (2).
- Wait about two minutes, to allow the oil to flow uniformly inside the oil pan; repeat the operation until the oil starts flowing out of the hole (1).
- Tighten the level screw (1).
- Tighten the filling plug (2).



CHANGING
THE TRANSMISSION OIL

Carefully read p. 29 (TRANSMISSION OIL) and p. 47 (MAINTENANCE).

Check the transmission oil level every 4000 km (2500 mi), change it after the first 1000 km (625 mi) and successively every 12000 km (7500 mi).



To change the oil, proceed as follows:

- Start the engine, see p. 40 (STARTING) and let it idle for a few minutes, in order to facilitate the outflow of the oil during the draining phase.

Position the vehicle on firm and flat ground.

- Stop the engine and let it cool down for at least ten minutes, in order to allow the oil to flow back to the oil pan and to cool down.

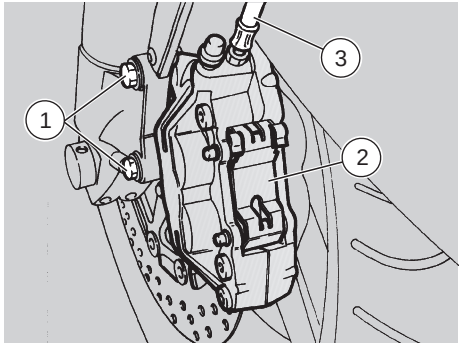
When warmed up, the engine contains hot oil; therefore, while carrying out the operations described here below be particularly careful, in order to avoid burns.

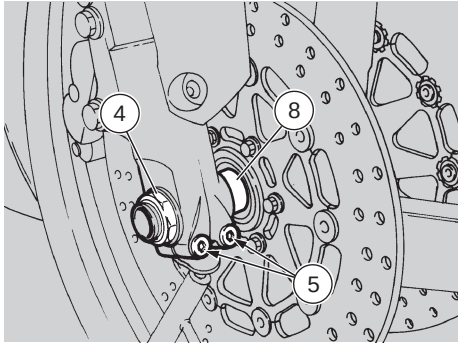
- Keep the vehicle in vertical position, with the two wheels resting on the ground.
- Put a container (1) with at least 700 cm^3 capacity in correspondence with the drain plug (2).
- Unscrew and remove the drain plug (2).
- Unscrew and remove the filling plug (3).
- Drain the oil and let it drip into the container (1) for a few minutes.
- Remove the metal residues from the drain plug (2) magnet.
- Screw and tighten the drain plug (2).

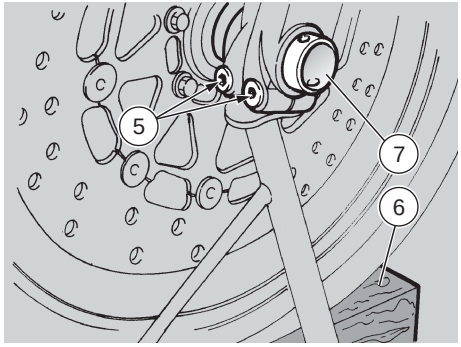
Drain plug (2) driving torque:
27 Nm (2.7 kgm).

- Pour about 700 cm^3 of transmission oil through the filling opening (1), see p. 86 (LUBRICANT CHART).
- Tighten the filling plug (1).
- Start the engine, see p. 40 (STARTING) and let it idle for about one minute, in order to ensure the filling up of the transmission oil circuit.

Check the oil level and top up if necessary, see p. 50 (CHECKING THE TRANSMISSION OIL LEVEL AND TOPPING UP).







FRONT WHEEL

The disassembly and reassembly of the front wheel may be difficult for unskilled operators. If necessary, contact an aprilia **Official Dealer.**
If you want to perform these operations personally, keep to the following instructions.

Carefully read p. 47 (MAINTENANCE).

While disassembling and reassembling the wheel, be careful not to damage the brake pipes, the discs and the pads.

To remove the front wheel it is necessary to use the appropriate front and rear support stands OPT.

DISASSEMBLY

- Position the vehicle on the appropriate rear support stand, see p. 49 (POSITIONING THE VEHICLE ON THE REAR SUPPORT STAND OPT).
- Position the vehicle on the appropriate front support stand, see p. 49 (POSITIONING THE VEHICLE ON THE FRONT SUPPORT STAND OPT).

Make sure that the vehicle is stable.

- Have someone keep the handlebar steady in running position, so that the steering is locked.

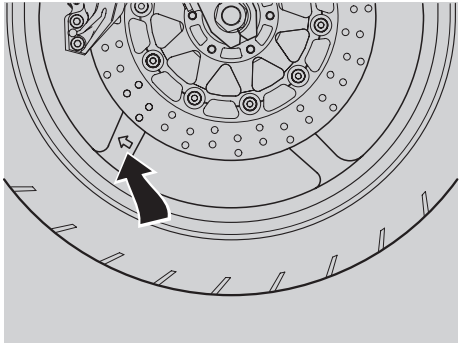
Brake caliper screw (1) driving torque: 50 Nm (5 kgm).

- ★ Unscrew and remove the two screws (1) that fasten the front brake caliper (2).
- ★ Withdraw the brake caliper (2) from the disc, leaving it attached to the pipe (3).

Never pull the front brake lever after removing the calipers, otherwise the pistons may go out of their seats, thus causing the outflow of the brake fluid. In this case consult your aprilia **Official Dealer, who will carry out the proper maintenance operation.**

Wheel nut (4) driving torque: 80 Nm (8 kgm).

- Loosen and remove the nut (4), taking the washer.
- ★ Partially unscrew the two screws (5) from the wheel pin clamp.
- Put a support (6) under the tyre, in such a way as to keep the wheel in its position after loosening it.
- Withdraw the wheel pin (7) from the left side.
- Remove the wheel by withdrawing it from the front and take the spacer ring (8).



REASSEMBLY

Carefully read p. 47 (MAINTENANCE).

While reassembling the wheel, be careful not to damage the brake pipes, discs and pads.
The arrow on the side of the wheel indicates the rotation direction. Be careful to reassemble the wheel correctly, as indicated by the arrow on the right side of the vehicle (see figure).

- Spread a film of lubricating grease on the whole length of the wheel pin (7), see p. 86 (LUBRICANT CHART).

The spacer ring (8) must be positioned with the side having longer diameter facing the fork right rod.

- Position the spacer ring (8) in its seat on the wheel.
- Position the wheel between the fork rods on the support (6).
- Move the wheel until its central hole and the holes on the fork are aligned.

Danger of injury.
Do not introduce your fingers to align the holes.

- Introduce the wheel pin (7) completely.
- Position the washer and tighten the nut (4) manually.
- Keep the wheel pin (7) fixed.
- Tighten the nut (4) definitively.

Wheen nut (4) driving torque: 80 Nm (8 kgm).

Proceed with care, in order not to damage the brake pads.

- ★ Insert the brake caliper (2) on the disc and position it so that its fastening holes and the holes on the support are aligned.
- ★ Screw and tighten the two screws (1) that fasten the brake caliper.

Brake caliper screw (1) driving torque: 50 Nm (5 kgm)

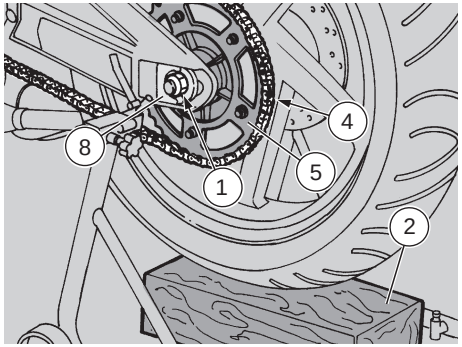
- With pulled front brake lever, press the handlebar repeatedly, thrusting the fork downwards. In this way the fork rods will settle properly.
- ★ Tighten the two screws (5) of the wheel pin clamp.

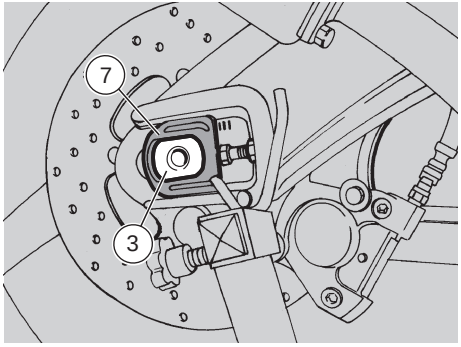
Wheel pin clamp screw (5) driving torque: 10 Nm (1 kgm)

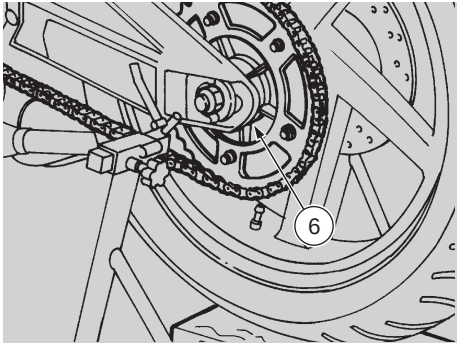
After reassembly, pull the front brake lever repeatedly and check the correct functioning of the braking system.

Check the wheel centering.

Have the driving torques, centering and balancing of the wheel checked by your aprilia **Official Dealer, in order to avoid accidents that may be harmful for you and/or other people.**







REAR WHEEL

The disassembly and reassembly of the rear wheel may be difficult for unskilled operators. If necessary, contact an aprilia **Official Dealer.**

If you want to perform these operations personally, keep to the following instructions.

Carefully read p. 47 (MAINTENANCE).

Before carrying out the following operations, let the engine and the silencer cool down until they reach room temperature, in order to avoid burns.

While disassembling and reassembling the wheel, be careful not to damage the brake pipe, the disc and the pads.

To remove the rear wheel it is necessary to use the appropriate rear support stand OPT.

DISASSEMBLY

- Position the vehicle on the appropriate rear support stand, see p. 49 (POSITIONING THE VEHICLE ON THE REAR SUPPORT STAND OPT).

Wheel nut (1) driving torque: 100 Nm (10 kgm).

- Loosen and remove the nut (1), taking the washer.
- Put a support (2) under the tyre, in such a way as to keep the wheel in its position after loosening it.
- Withdraw the wheel pin (3) from the right side.
- Make the wheel advance and release the drive chain (4) from the crown gear (5).

Check the position of the spacer ring (6) and the chain tighteners (7-8), in order to be able to reassemble them correctly.

- Remove the wheel by withdrawing it from the back and if necessary take the left spacer ring (6) and the two right and left chain tighteners (7-8).

Never pull the rear brake lever after removing the wheel, otherwise the caliper piston may go out of its seat, thus causing the outflow of the brake fluid. In this case consult your aprilia **Official Dealer, who will carry out the proper maintenance operation.**

REASSEMBLY

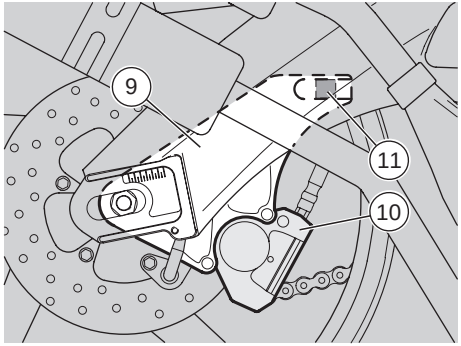
Before proceeding with the reassembly, make sure that support plate (9) of the brake caliper (10) is positioned correctly; the plate slot must be inserted in the appropriate stop pin (11) in the inner part of the rear fork right rod.
Insert the disc in the brake caliper carefully.

- Spread a film of lubricating grease on the whole length of the wheel pin (3), see p. 86 (LUBRICANT CHART).

The left spacer ring (6) must be positioned with the side having longer diameter facing the rear fork left rod.

- If they have been removed, position the two right and left chain tighteners (7-8) in their seat in the rear fork rods and the left spacer ring (6) on the wheel.
- Position the wheel between the rear fork rods on the support (2).
- Make the wheel advance and position the drive chain (4) on the crown gear (5).
- Move the wheel backwards, until its central hole and the holes on the rear fork are aligned.

Danger of injury.
Do not introduce your fingers to align the holes.



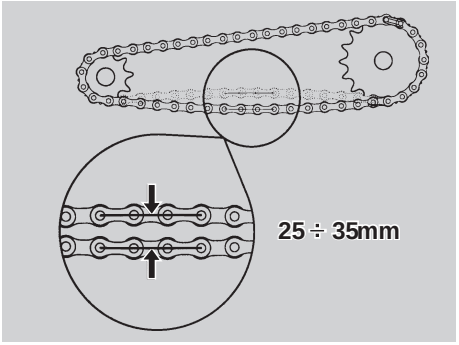
- Rotate the support plate (9), complete with brake caliper (10) and with fulcrum on the stop pin (11), until it is aligned with the holes.
- Introduce the wheel pin (3) completely on the right side.

Make sure that the wheel pin (3) is completely inserted, with the head in the relevant seat on the right chain tightener (7).

- Position the washer and tighten the nut (1) manually.
- Check the chain tension, see p. 56 (DRIVE CHAIN).
- Tighten the nut (1).

Wheel nut (1) driving torque:
100 Nm (10 kgm).

Check the wheel centering.
Have the driving torques, centering and balancing of the wheel checked by your aprilia **Official Dealer, in order to avoid accidents that may be harmful for you and/or other people.**



DRIVE CHAIN

Carefully read p. 47 (MAINTENANCE).

The vehicle is equipped with an endless chain, in which a ring link joint is not used.

An excessive slackening of the chain can cause it to come off of the sprockets, which often results in accidents or serious damage to the vehicle.
Periodically check the slack and adjust it if necessary, see p. 56 (ADJUSTMENT).
To change the chain, contact an aprilia **Official Dealer, who will ensure you prompt and accurate servicing.**

Incorrect maintenance may cause the untimely wear of the chain and/or damages to the pinion and/or the crown.
Carry out the maintenance operations more frequently if you use the vehicle in difficult conditions or on dusty and/or muddy roads.

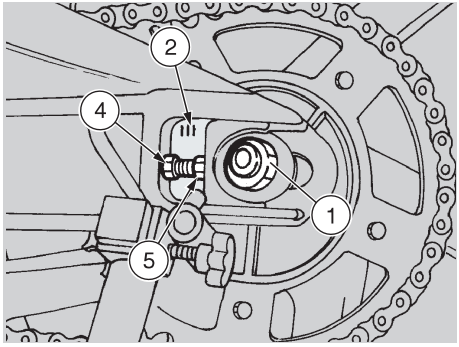
CHECKING THE SLACK

To check the slack, proceed as follows:

- Stop the engine.
- Position the vehicle on the stand, see p. 46 (POSITIONING THE VEHICLE ON THE STAND).
- Position the shifting lever in neutral.
- Make sure that the vertical oscillation, in an intermediate point between pinion and crown in the lower part of the chain, is about 25 ÷ 35 mm.
- Move the vehicle forwards, or turn the wheel, in order to be able to check the vertical oscillation of the chain even when the wheel turns; the slack must be constant in all the rotation phases of the wheel.

If in some positions the slack is higher than in others, this means that there are crushed or seized links; in this case, contact an aprilia **Official Dealer. To prevent the risk of seizures, lubricate the chain frequently, see p. 57 (LUBRICATION AND CLEANING).**

If the slack is uniform, but higher or lower than 25 ÷ 35 mm, adjust it, see p. 56 (ADJUSTMENT).



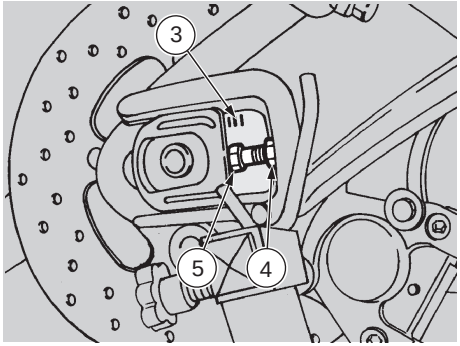
ADJUSTMENT

To adjust the chain it is necessary to use the appropriate rear support stand OPT.

If after the check it is necessary to adjust the chain tension, proceed as follows:

- Position the vehicle on the appropriate rear support stand OPT, see p. 49 (POSITIONING THE VEHICLE ON THE REAR SUPPORT STAND OPT).
- Loosen the nut (1) completely.

For the wheel centering fixed reference marks (2-3) are provided, which can be seen inside the chain tightener seats on the rear fork arms, before the wheel pin.



- Loosen the two lock nuts (4).
- Act on the adjusters (5) and adjust the chain slack, making sure that the reference marks (2-3) are correctly positioned on both sides of the vehicle.
- Tighten the two lock nuts (4).
- Tighten the nut (1).

Wheel nut driving torque:
100 Nm (10 kgm).

- Check the chain slack, see p. 56 (CHECKING THE SLACK).

CHECKING THE WEAR OF CHAIN, PINION AND CROWN

Further, check the chain and sprockets and make sure that they do not present:

- Damaged rollers.
- Loose pins.
- Dry, rusty, crushed or seized links.
- Excessive wear.
- Lacking O rings.
- Sprocket or teeth excessively worn or damaged.

If the chain rollers are damaged, the pins are loose and/or the O rings are damaged or lacking, it is necessary to change the whole chain unit (both sprockets and chain).

Lubricate the chain frequently, especially if there are dry or rusty parts. The crushed or seized links must be lubricated and made work again.
If this is not possible, contact an aprilia **Official Dealer, who will provide for changing the chain.**

- Finally, check the wear of the rear fork protection shoe.

LUBRICATION AND CLEANING

The drive chain is provided with O rings among the links, in order to keep the grease inside them. Carry out the adjustment, lubrication, cleaning and change of the chain with great care.

Lubricate the chain every 500 km (312 mi) or whenever necessary.

Lubricate the chain with spray grease for chains provided with sealing rings, or with SAE 80W-90 oil.

The lubricants for chains available on the market can contain substances that are dangerous for the rubber sealing rings of the chain.

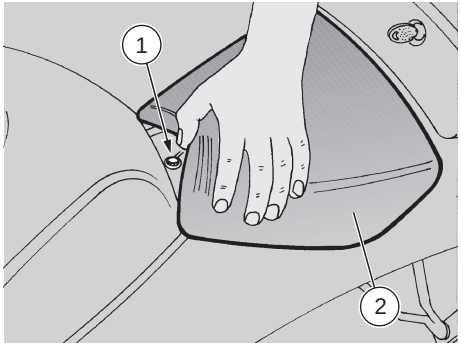
Never wash the chain with water jets, steam jets, high-pressure water jets and highly inflammable solvents.

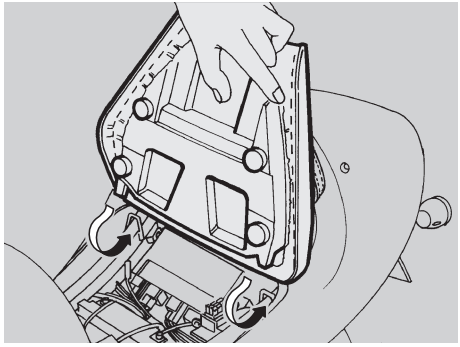
REMOVING THE RIDER SADDLE

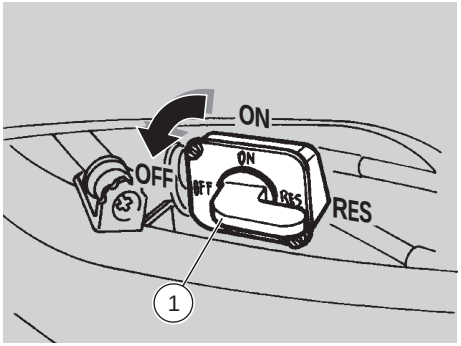
- Position the vehicle on the stand, see p. 46 (POSITIONING THE VEHICLE ON THE STAND).
- Partially lift the front edge of the saddle (see figure).
- Unscrew and remove the screw (1) and take the bushing.
- Raise and remove the saddle (2).

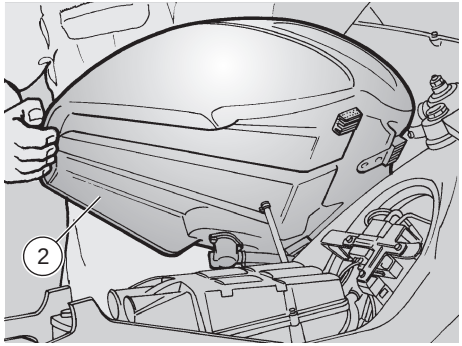
Upon reassembly, insert the rear tangs of the saddle (2) in the relevant seats (see figure).

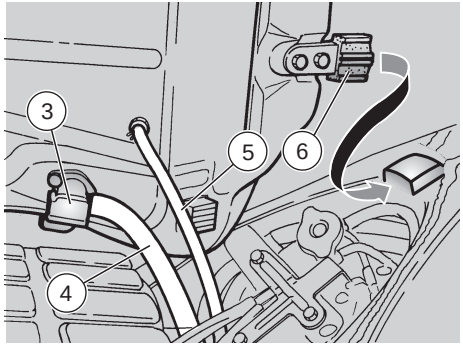
Before leaving, make sure that the saddle (2) is properly positioned and locked.











REMOVING THE FUEL TANK

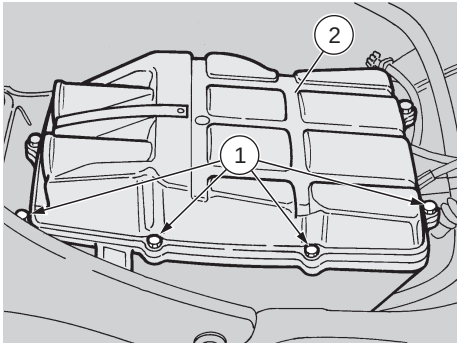
Carefully read p. 29 (FUEL) and p. 47 (MAINTENANCE).

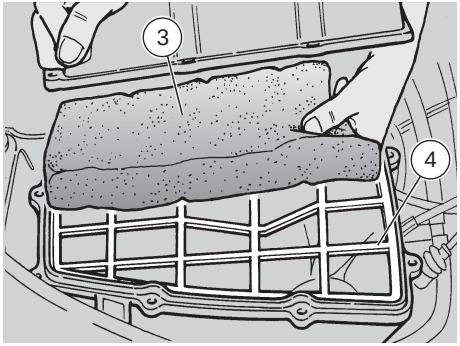
Risk of fire.
Wait until the engine and the exhaust silencer have completely cooled down.

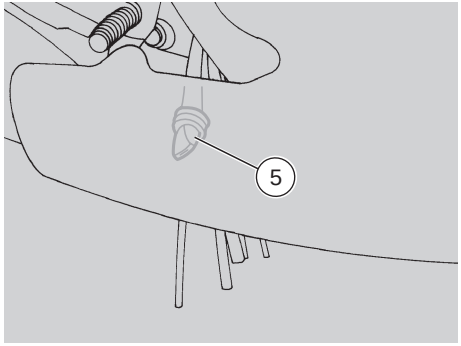
Fuel vapours are noxious for your health.
Before proceeding, make sure that the room in which you are working is properly ventilated.
Do not inhale fuel vapours.
Do not smoke and do not use naked flames. Do not dispose of fuel in the environment.

- Move the fuel tap lever (1) to position "**OFF**".
- Empty the fuel tank, see p. 79 (DRAINING THE FUEL TANK).
- Remove the rider saddle, see p. 58 (REMOVING THE RIDER SADDLE).
- From the left side of the vehicle, seize the fuel tank (2) firmly with both hands, withdraw it from behind and lift it.
- Incline the fuel tank (2) slightly leftwards (see figure).
- Withdraw the fuel pipe (4) from the cock (3).
- Withdraw the water drain pipe (5) from the fuel tank plug.
- Remove the fuel tank (2) completely.

Upon reassembly, make sure that the protruding element (6) is correctly inserted in the frame mounting lug (see figure).







AIR CLEANER

Clean the air cleaner every 4000 km (2500 mi) or 8 months, change it every 8000 km (5000 mi) or more frequently if the vehicle is used on dusty or wet roads.

It is possible to clean the air cleaner partially after using the vehicle on this kind of roads.

The partial cleaning of the filter does not exclude or postpone the replacement of the filter itself.

REMOVAL

- Remove the fuel tank, see p. 59 (REMOVING THE FUEL TANK).
- ★ Unscrew and remove the four screws (1) that fasten the filter case cover (2).
- Remove the filter case cover (2).
- Remove the filtering element (3) and the grid (4).

Plug the opening with a clean cloth, to prevent any foreign matters from entering the suction pipes.

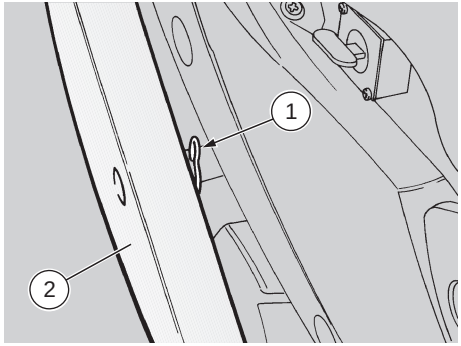
Cleaning

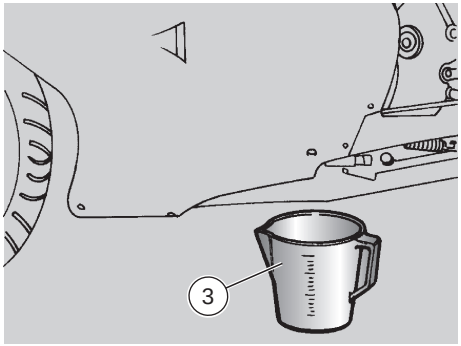
- Clean the filtering element (3) with clean, non-inflammable solvents or solvents with high volatility point, then let it dry thoroughly.
- Apply a filter oil or a thick oil (SAE 80W-90) on the whole surface of the filtering element, then squeeze it to eliminate the oil in excess.

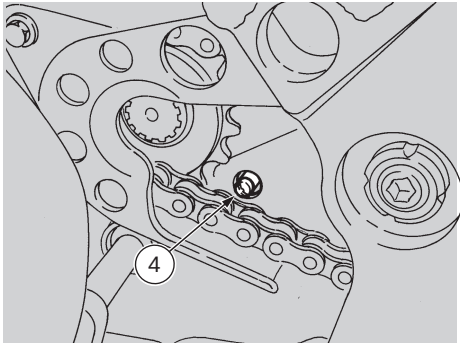
The filtering element (3) must be well impregnated, though not dripping.

Changing

- Replace the filtering element (3) with a new one of the same type.
- Make sure that the gasket positioned under the cover (2) is intact; if it is damaged, change it.
- Every 4000 km (2500 mi), press the ejector (5) with two fingers, so that any impurity that may have accumulated inside the filter case can be discharged.







BLEEDING THE MIXER OIL

Carefully read p. 47 (MAINTENANCE).

Bleed the mixer oil system whenever you run out of oil in the mixer oil tank.

- Position the vehicle on the stand, see p. 46 (POSITIONING THE VEHICLE ON THE STAND).
- Top up the mixer oil tank, see p. 33 (MIXER OIL TANK).
- Remove the split pin (1).
- Move the left part of the fairing (2) slightly outwards.
- Put a container (3) in correspondence with the drain screw (4).
- Unscrew and remove the drain screw (4) (cross-headed) and wait until the oil flows out of the hole.

It is important to wait until there is no more air in the system, since the operation of the engine with air in the mixer oil system may cause serious damage to the engine itself.

- When no more air bubbles can be seen in the oil that flows out of the hole, screw and tighten the drain screw (4).
- Put back the fairing (2).
- Insert the split pin (1).
- Check the mixer oil level and top up if necessary, see p. 33 (MIXER OIL TANK).

INSPECTING THE FRONT AND REAR SUSPENSIONS

Have the front fork oil changed by an aprilia **Official Dealer, who will ensure you prompt and accurate servicing.**

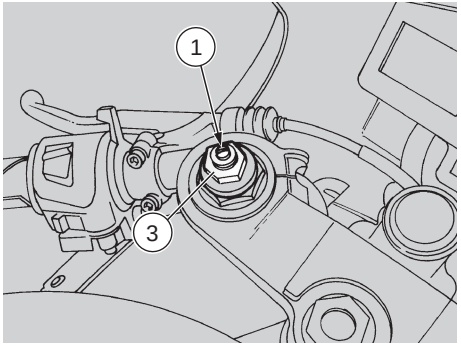
Carefully read p. 47 (MAINTENANCE).

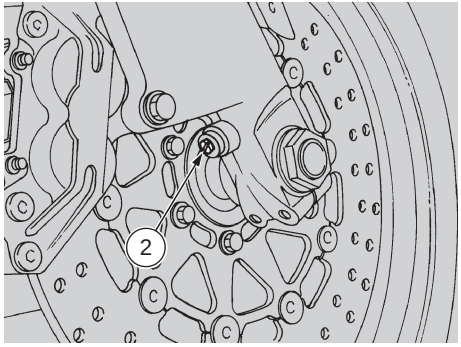
Change the front fork oil after the first 4000 km (2500 mi).
Check the oil every 4000 km (2500 mi) and if it is dirty change it.

Further, carry out the following checking operations:

- With pulled front brake lever, press the handlebar repeatedly, thrusting the fork downwards.
  The stroke must be gentle and there must be no trace of oil on the rods.
- Check the fastening of all the components and the functionality of the front and rear suspension joints.

If you notice irregularities in the operation or if the help of a qualified technician is necessary, contact your aprilia **Official Dealer.**





FRONT SUSPENSION

The front suspension consists of an hydraulic fork connected to the steering column by means of two plates.

For the setting of the vehicle attitude, each rod of the fork is provided with an upper screw (1) for the adjustment of the hydraulic braking with extended shock absorber, a lower screw (2) for the adjustment of the hydraulic braking with compressed shock absorber and an upper nut (3) for the adjustment of the spring preload.

ADJUSTING THE FRONT FORK

The standard setting of the front fork is such as to satisfy most driving conditions at low and high speed, either with reduced load and full load.

However, it is also possible to adjust the setting according to the intended use of the vehicle.

Use the notches (1-2) provided on the adjusters as reference marks for the adjustment of the hydraulic braking with compressed and extended shock absorber.

Give the adjusters (1-2) 1/8 turn at a time and turn the adjusting nut (3) one notch at a time. Test the vehicle repeatedly on the road, until obtaining the optimal adjustment.

Set the same spring preload and hydraulic braking for both rods: a different setting of the rods decreases the stability of the vehicle while riding.

When the spring preload is increased, it is necessary to increase also the hydraulic braking, in order to avoid sudden jerks while riding.

Lower screw adjusters (1) (2 ∫ turns in total)	By rotating them clockwise (H)	By rotating them anticlockwise (S)
Function	Increase of the hydraulic braking with extended shock absorber	Decrease of the hydraulic braking with extended shock absorber
Recommended kind of road	Smooth or normal roads	Roads with uneven surface
Notes	Rider and passenger	Solo rider

Upper screw adjusters (2) (3 turns in total)	By rotating them clockwise	By rotating them anticlockwise
Function	Increase of the hydraulic braking with compressed shock absorber	Decrease of the hydraulic braking with compressed shock absorber
Recommended kind of road	Smooth or normal roads	Roads with uneven surface
Notes	Rider and passenger	Solo rider

Upper adjusting nuts (3) (8 notches in total)	By rotating them clockwise (screwing)	By rotating them anticlockwise (unscrewing)
Function	Spring preload increase	Spring preload decrease
Attitude	The vehicle is more rigid	The vehicle is less rigid
Recommended kind of road	Smooth or normal roads	Roads with uneven surface
Notes	Rider and passenger	Solo rider

REAR SUSPENSION

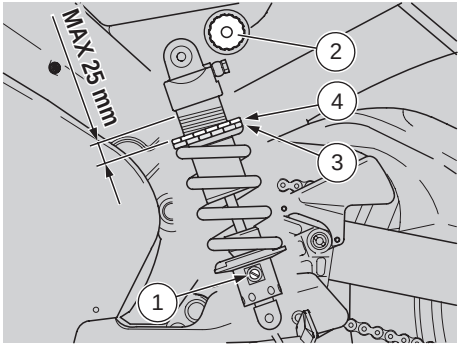
The rear suspension consists of a spring-shock absorber unit, fixed to the frame by means of silent-blocks and to the rear fork by means of lever systems. For the setting of the vehicle attitude, the shock absorber is provided with a screw adjuster (1) for the adjustment of the hydraulic braking with extended shock absorber, a knob adjuster (2) for the adjustment of the hydraulic braking with compressed shock absorber, a ring nut for the adjustment of the spring preload (3) and a locking ring nut (4).

It is possible to adjust the shock absorber axis distance to personalize the vehicle attitude.
For this kind of adjustment, contact an aprilia **Official Dealer.**

ADJUSTING THE REAR SHOCK ABSORBER

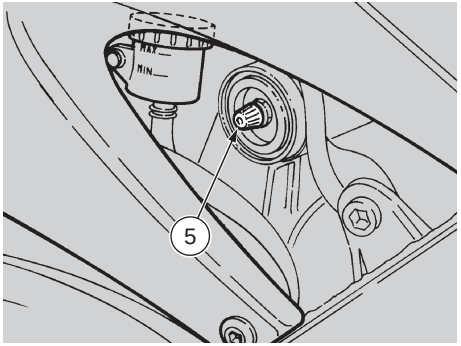
The standard setting of the rear shock absorber is such as to satisfy most driving conditions at low and high speed, either with reduced load and full load.
However, it is also possible to adjust the setting according to the intended use of the vehicle.

The adjusting ring nut must not be screwed for more than 25 mm from the beginning of the thread (see figure). If this measure is exceeded, even the slightest unevenness on the road surface will cause sudden jerks and it will be useless to adjust the screw (1).



- Slightly unscrew the locking ring nut (4) by means of the appropriate spanner OPT.
- Act on the adjusting ring nut (3) (shock absorber spring preload adjustment) (see figure).
- If necessary, adjust the screw (1) (adjustment of the hydraulic braking with extended shock absorber) (see table).
- Once the optimal attitude has been obtained, tighten the locking ring nut (4) completely.

Adjust the spring preload and the hydraulic braking with extended shock absorber according to the conditions of use of the vehicle. When the spring preload is increased, it is necessary to increase also the hydraulic braking with extended shock absorber, in order to avoid sudden jerks while riding.



If the vehicle attitude is set for full-load riding, it is advisable not to rotate the screw (1) leftwards (anticlockwise), in order to avoid sudden jerks while riding. If necessary, contact an aprilia **Official Dealer.**

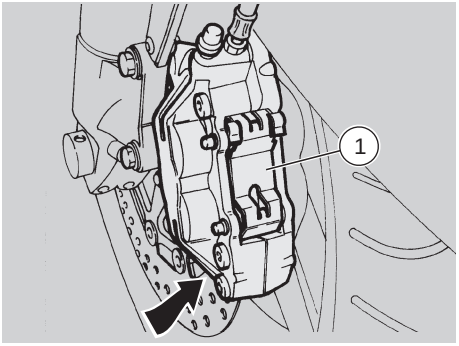
In order not to affect the correct attitude of the vehicle, neither remove the small plug (5), nor adjust the underlying valve, otherwise there will be a nitrogen outflow.

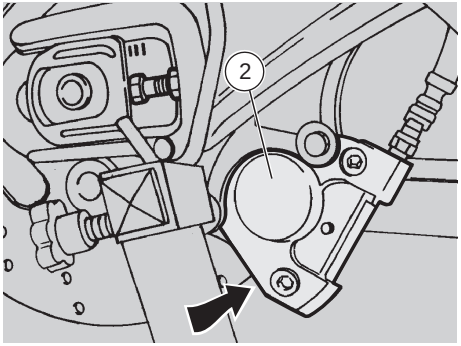
Turn the screw adjuster (1) 2-3 clicks at a time, the knob adjuster (2) 5-6 clicks at a time and the adjusting ring nut (3) one turn at a time. Test the vehicle repeatedly on the road, until obtaining the optimal adjustment.

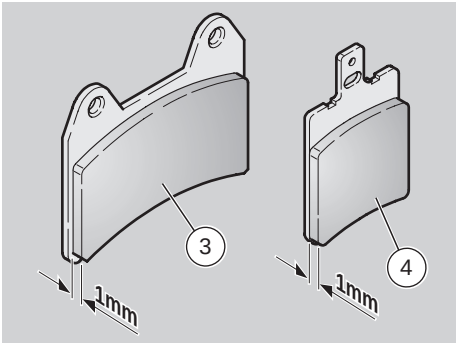
Screw adjuster (1) (about 18 clicks)	By rotating it clockwise (H)	By rotating it anticlockwise (S)
Function	Increase of the hydraulic braking with extended shock absorber	Decrease of the hydraulic braking with extended shock absorber
Recommended kind of road	Smooth or normal roads	Roads with uneven surface
Notes	Rider and passenger	Solo rider

Knob adjuster (2) (about 42 clicks)	By rotating it clockwise (+)	By rotating it anticlockwise (–)
Function	Increase of the hydraulic braking with compressed shock absorber	Decrease of the hydraulic braking with compressed shock absorber
Recommended kind of road	Smooth or normal roads	Roads with uneven surface
Notes	Rider and passenger	Solo rider

Adjusting ring nut (3)	By screwing it	By unscrewing it
Function	Spring preload increase	Spring preload decrease
Attitude	The vehicle is more rigid	The vehicle is less rigid
Recommended kind of road	Smooth or normal roads	Roads with uneven surface
Notes	Rider and passenger	Solo rider







CHECKING THE BRAKE PAD WEAR

Carefully read p. 30 (BRAKE FLUID (recommendations)), p. 30 (DISC BRAKES) and p. 47 (MAINTENANCE).

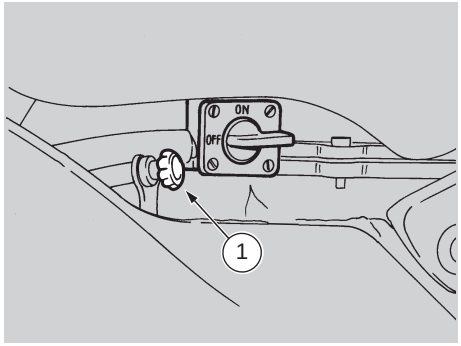
The following information refer to a single braking system, but are valid for both.

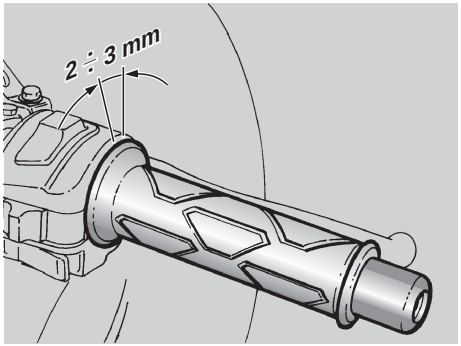
Check the brake pad wear after the first 1000 km (625 mi) and successively every 4000 km (2500 mi).
The wear of the brake pads depends on the use, on the kind of drive and on the road. The wear will be greater when the vehicle is driven on dirty or wet roads.

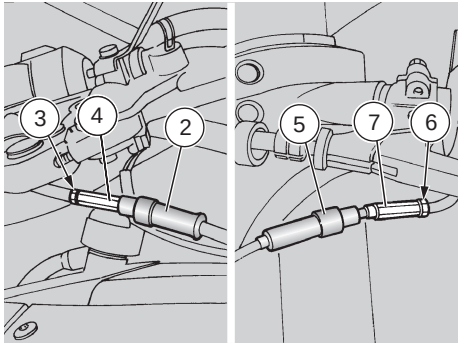
To carry out a rapid checking of the wear of the pads, proceed as follows:

- Position the vehicle on the stand, see p. 46 (POSITIONING THE VEHICLE ON THE STAND).
- Carry out a visual checking of the friction material thickness by looking between the brake caliper and the pads.
  Proceed:
  – from below, on the front part, for the front brake calipers (1);
  – from below, on the rear part, for the rear brake caliper (2).
- If the thickness of the friction material (even of one pad only) has reduced to about 1 mm, replace both pads.
  – Front pad (3).
  – Rear pad (4).

Have the pads changed by your aprilia **Official Dealer.**







IDLING ADJUSTMENT

Carefully read p. 47 (MAINTENANCE).

Adjust the idling every time it is irregular.

To carry out this operation, proceed as follows:

- Ride for a few miles until reaching the normal running temperature, see p. 17 (**Coolant temperature indicator**).
- Check the engine idling rpm on the revolution counter.

The engine idling speed must be about 1300 ± 150 rpm.

If necessary:

- Adjust the knob (1).
  By SCREWING IT (clockwise), you increase the engine rpm.
  By UNSCREWING IT (anticlockwise), you decrease the engine rpm.
- Twist the throttle grip, accelerating and decelerating a few times to make sure that it functions correctly and to check if the idling speed is constant.

If necessary, contact your aprilia **Official Dealer.**

ADJUSTING THE ACCELERATOR CONTROL

Carefully read p. 47 (MAINTENANCE).

The ideal slack of the accelerator control should be about 2 ÷ 3 mm and it can be measured on the grip end (see figure).
To adjust the slack, proceed as follows:

- Remove the protection element (2).
- Loosen the nut (3) (by screwing it).
- Act on the adjuster (4) placed at the beginning of the accelerator control cable.

Once you have carried out the adjustment, tighten the nut (3) (by unscrewing it), thus locking the adjuster (4) and put back the protection element (2).

ADJUSTING THE COLD START CONTROL ( )

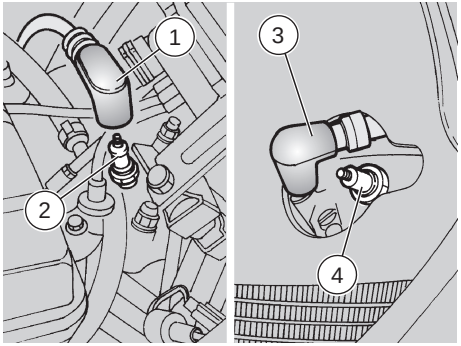
Carefully read p. 47 (MAINTENANCE).

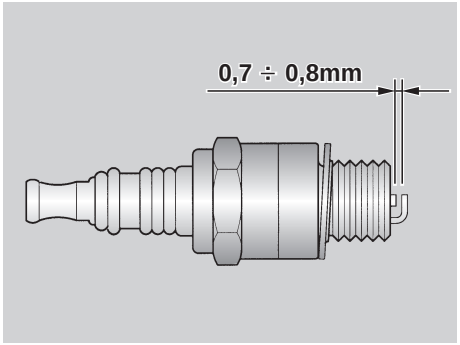
The ideal slack of the cold start control should be about 2-3 mm.

To adjust the slack, proceed as follows:

- Remove the protection element (5).
- Loosen the nut (6) (by screwing it).
- Act on the adjuster (7) placed at the beginning of the cold start control cable.

Once you have carried out the adjustment, tighten the nut (6) (by unscrewing it), thus locking the adjuster (7) and put back the protection element (5).





SPARK PLUGS

Carefully read p. 47 (MAINTENANCE).

Check the spark plugs every 6000 km (3700 mi).

Periodically remove the spark plugs and clean them carefully, removing carbon deposits; change them if necessary.

To reach the spark plugs:

- Remove the fuel tank, see p. 59 (REMOVING THE FUEL TANK).

To remove and clean the spark plugs:

- Remove the cap (1) of the spark plug (2) from the rear cylinder and the cap (3) of the spark plug (4) from the front cylinder.

The description of the following operations refers to one spark plug only, but it is valid for both.

- Remove all the dirt from the base of the spark plug, then unscrew it with the spanner you will find in the tool kit and extract it from its seat, taking care that neither dust nor other substances enter the cylinder.
- Make sure that there are neither carbon deposits, nor corrosion marks on the electrode and on the central porcelain part; if necessary, clean them with the special cleaners for spark plugs, with an iron wire and/or a metal brush.
- Energetically blow some air, in order to prevent the removed residues from getting into the engine.
  If the spark plug has crackings on the insulating material, corroded electrodes or excessive deposits, it must be changed.
- Check the spark plug gap with a thickness gauge.
  The gap must be 0.7 ÷ 0.8 mm; if necessary adjust it, carefully bending the earth electrode.
- Make sure that the washer is in good conditions. With the washer on, screw the spark plug by hand in order not to damage the thread.
- Tighten the spark plug by means of the spanner you will find in the tool kit, giving it half a turn to compress the washer.

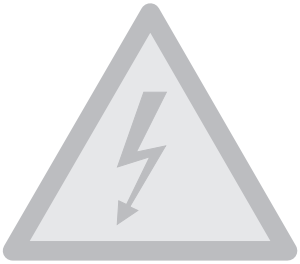
Spark plug driving torque:
20 Nm (2 kgm).

The spark plug must be well tightened, otherwise the engine may overheat and be seriously damaged. Use the recommended type of spark plug only, in order not to compromise the life and performance of the engine.

RECOMMENDED SPARK PLUGS:

NGK	NOTES
BR8 ECM	If the standard spark plugs tend to blacken, replace them with these, having lower heat rating.
BR9 ECM	Standard spark plugs.
BR10 ECM	If the standard spark plugs tend to overheat and are white, replace them with these, having higher heat rating.

- Position the spark plug cap (1 and 3) properly, so that it does not come off due to the vibrations of the engine.
- Put back the fuel tank.



BATTERY

Carefully read p. 47 (MAINTENANCE).

Check the electrolyte level and the tightening of the terminals after the first 1000 km (625 mi) and successively every 4000 km (2500 mi) or 8 months.

The electrolyte in the battery is toxic and caustic and if it gets in contact with the skin it can cause burns, since it contains sulphuric acid. Wear protection clothes, a face mask and/or goggles during maintenance operations.
In case of contact with the skin, rinse with plenty of water.

In case of contact with the eyes, rinse with plenty of water for fifteen minutes, then consult an oculist without delay.

If the electrolyte is accidentally swallowed, drink a lot of water or milk, then continue drinking milk of magnesia or vegetable oil and consult a doctor without delay.

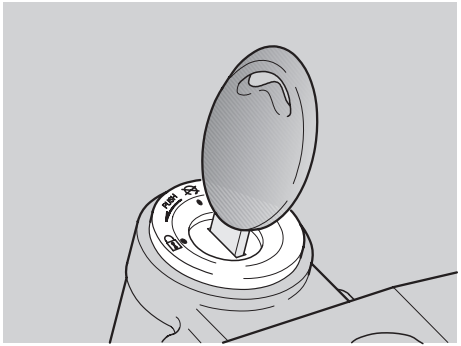
The battery gives off explosive gases; keep it away from flames, sparks, cigarettes and any other source of heat.

During the recharging or the use, make sure that the room is properly ventilated and avoid inhaling the gases released during the recharging.

KEEP AWAY FROM CHILDREN

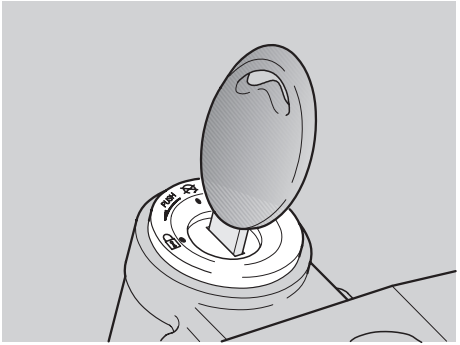
Never invert the connection of the battery cables.

Do not incline the vehicle too much, in order to avoid dangerous leaks of the battery fluid.



Connect and disconnect the battery with the ignition switch in position “⊠”.

Connect first the positive cable (+) and then the negative cable (–).
Disconnect following the reverse order.

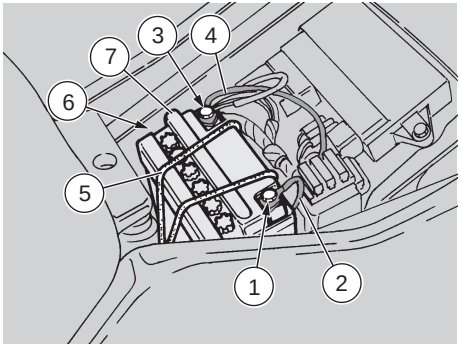


REMOVING THE BATTERY

To remove the battery it is necessary to set to zero the digital clock and the red line setting. To reset these functions, see p. 18 (MULTIFUNCTION COMPUTER).

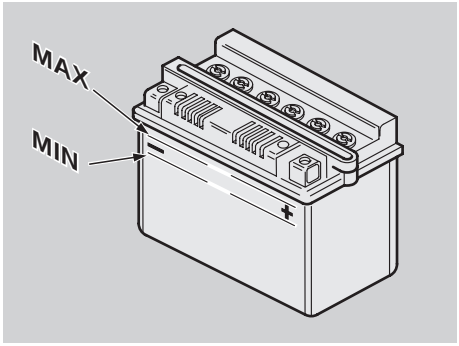
Carefully read p. 69 (BATTERY).

- Make sure that the ignition switch is in position "⊠".
- Remove the rider saddle, see p. 58 (REMOVING THE RIDER SADDLE).



- Unscrew and remove the screw (1) on the negative terminal (-).
- Move the negative cable (2) sidewards.
- Unscrew and remove the screw (3) on the positive terminal (+).
- Move the positive cable (4) sidewards.
- Release the rubber band (5).
- Withdraw the breather pipe (6).
- Seize the battery (7) firmly and remove it from its compartment by lifting it.

Once it has been removed, the battery must be stored in a safe place and kept away from children.



CHECKING
THE ELECTROLYTE LEVEL

Carefully read p. 69 (BATTERY).

To check the electrolyte level, proceed as follows:

- Remove the battery, see p. 70 (REMOVING THE BATTERY).
- Make sure that the fluid level is included between the two "**MIN**" and "**MAX**" notches stamped on the battery side. Otherwise:
- Remove the element plugs.

Never exceed the "MAX" notch, since the level increases during the recharge.

- Top up by adding distilled water.

RECHARGING THE BATTERY

Carefully read p. 69 (BATTERY).

- Remove the battery, see p. 70 (REMOVING THE BATTERY).
- Remove the element plugs.
- Connect the battery with a battery charger.
- A recharge with an amperage equal to 1/10th of the battery capacity is recommended.
- After the recharging operation, check the electrolyte level again and if necessary top up with distilled water.
- Put back the element plugs.

Reassemble the battery only 5/10 minutes after disconnecting the recharge apparatus, since the battery continues to produce gas for a short lapse of time.

INSTALLING THE BATTERY

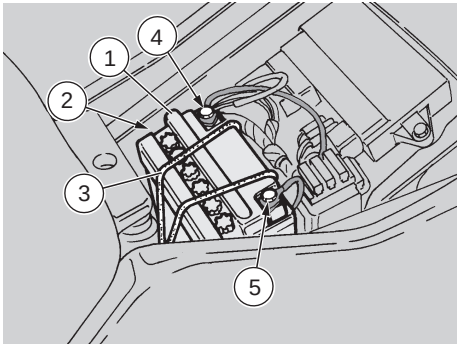
Carefully read p. 69 (BATTERY).

- Make sure that the ignition switch is in position "⚿".
- Remove the rider saddle, see p. 58 (REMOVING THE RIDER SADDLE).
- Put the battery (1) in its compartment.

Upon reassembly, connect first the positive cable (+) and then the negative cable (–).

Always connect the battery breather pipe, to prevent the sulphuric acid vapours from corroding the electric system, painted parts, rubber elements or gaskets when they exit the breather pipe itself.

- Insert the breather pipe (2).
- Fasten the rubber band (3).
- Connect the positive terminal (+) by means of the screw (4).
- Connect the negative terminal (–) by means of the screw (5).



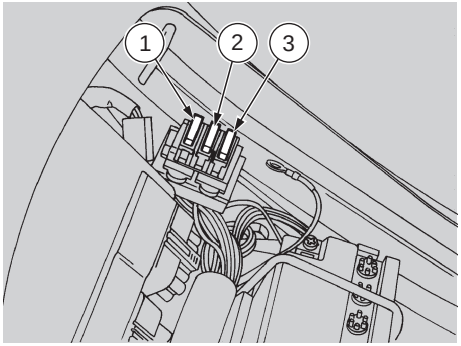
LONG INACTIVITY OF THE BATTERY

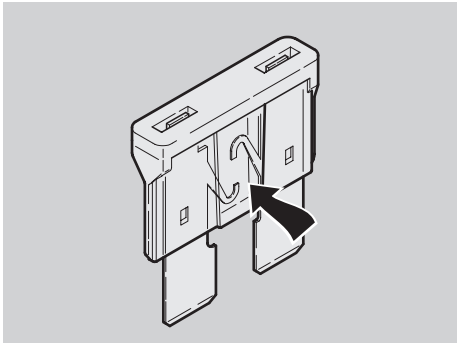
If the vehicle remains unused for more than 20 days, disconnect the 20A fuse, in order to avoid the battery deterioration resulting from the current consumption due to the multifunction computer.

If the vehicle remains unused for a long period:

- Remove the battery, see p. 70 (REMOVING THE BATTERY) and put it in a cool and dry place.
- Recharge it completely, by using a trickle charge, see p. 71 (RECHARGING THE BATTERY).

If the battery remains on the vehicle, disconnect the cables from the terminals. It is important to check the charge periodically (about once a month), during the winter or when the vehicle remains unused, in order to prevent the deterioration of the battery.





CHANGING THE FUSES

Do not repair faulty fuses. Never use fuses different from the recommended ones.
The use of unsuitable fuses may cause damages to the electric system or, in case of short circuit, even a fire.

If a fuse blows frequently, there probably is a short circuit or an overload in the electric system. In this case it is advisable to consult an aprilia **Official Dealer.**

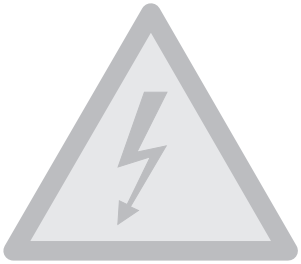
Carefully read p. 47 (MAINTENANCE).

If an electric component does not work or works irregularly, or if the vehicle fails to start, it is necessary to check the fuses.

- Turn the ignition switch to position "⚿", to avoid any accidental short circuit.
- Remove the rider saddle, see p. 58 (REMOVING THE RIDER SADDLE).

By removing the 20A fuse, you set the digital clock and the red line to zero. To reset these functions, see p. 18 (MULTIFUNCTION COMPUTER).

- Extract the fuses one by one and check if the filament is broken, (see figure).
- Before replacing a fuse, try to find out the cause of the trouble, if possible.
- Replace the damaged fuse with a new one having the same amperage.



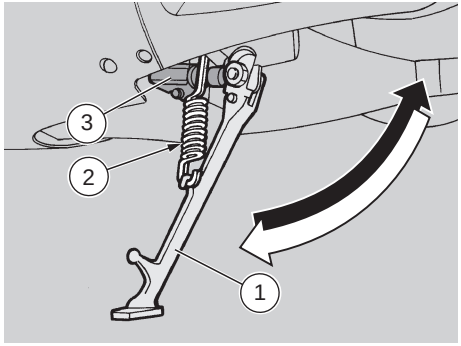
If you use one of the spare fuses, put a new fuse in the proper seat.

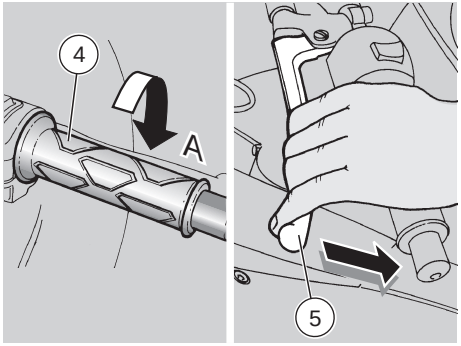
ARRANGEMENT OF THE FUSES

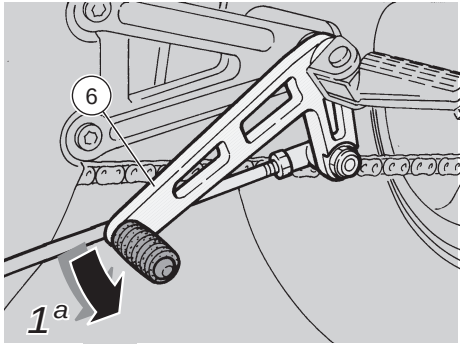
1) **20A fuse**
From the battery to key switch, voltage regulator, clock.

2) **15A fuse**
From the key switch to all light loads and horn.

3) **7.5A fuse**
From the key switch to ignition, solenoid valves, RAVE motor, start safety device, accelerator sensor.







CHECKING THE SIDE STAND AND THE SAFETY SWITCH

Carefully read p. 47 (MAINTENANCE) and p. 74 (CHECKING THE SWITCHES).

The side stand (1) must rotate without hindrances.

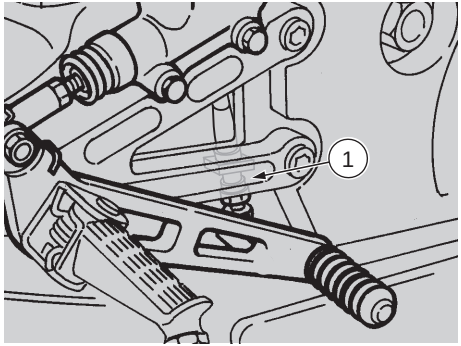
Carry out the following checks:

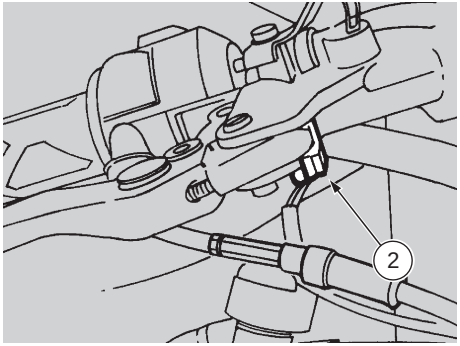
- The springs (2) must not be damaged, worn, rusty or weakened.
- The side stand must rotate freely, if necessary grease the joint, see p. 86 (LUBRICANT CHART).

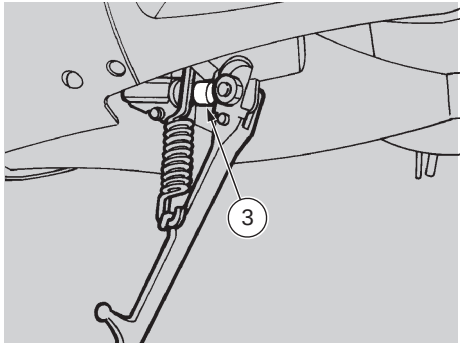
The side stand (1) is provided with a safety switch (3) that has the function to prevent or interrupt the operation of the engine with the gears on and the side stand (1) down.
To check the proper functioning of the safety switch (3), proceed as follows:

- Seat on the vehicle in driving position.
- Fold the side stand (1).
- Start the engine, see p. 40 (STARTING).
- With released throttle grip (4) (**Pos. A**) and engine idling, pull the clutch lever (5) completely.
- Engage the first gear, pushing the shifting lever (6) downwards.
- Lower the side stand (1), thus operating the safety switch (3).
  At this point the engine must stop.

If the engine does not stop, contact an aprilia **Official Dealer.**







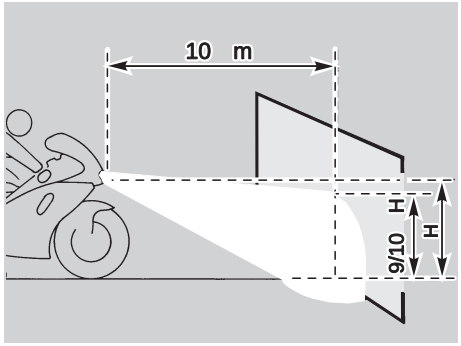
CHECKING THE SWITCHES

Carefully read p. 47 (MAINTENANCE).

The vehicle is provided with three switches:

1) **Switch on the rear brake control lever**
2) **Stoplight switch on the front brake control lever**
3) **Safety switch on the side stand**

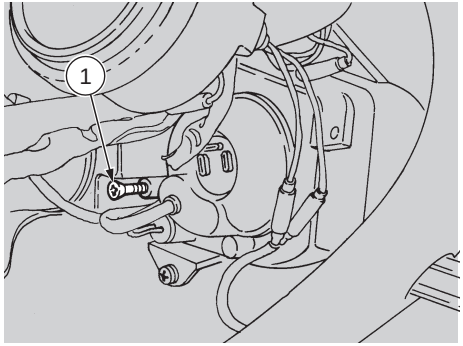
- Make sure that there are no dirt or mud deposits on the switch; the pin must be able to move without interferences, returning automatically to its initial position.
- Make sure that the cables are connected correctly.



ADJUSTING THE VERTICAL HEADLIGHT BEAM

To rapidly check the correct direction of the beam, place the vehicle on flat ground, 10 m away from a wall.

Turn on the low beam, sit on the vehicle and make sure that the beam projected on the wall is slightly under the horizontal line of the headlight (about 9/10th of the total height).

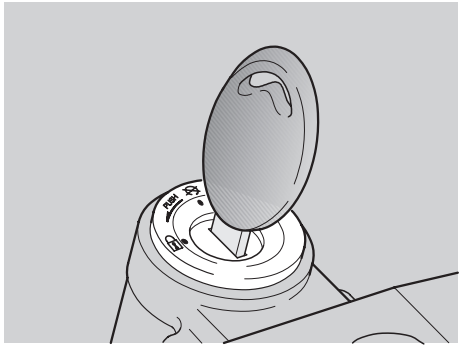


To adjust the headlight beam:

- Working on the rear left side of the front part of the fairing, adjust the apposite screw (1) by means of a short cross-tip screwdriver.

  By SCREWING IT (clockwise), you set the beam upwards.

  By UNSCREWING IT (anticlockwise), you set the beam downwards.



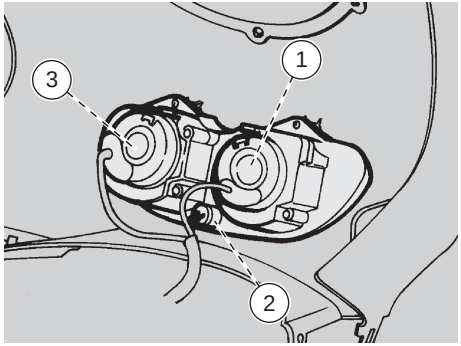
BULBS

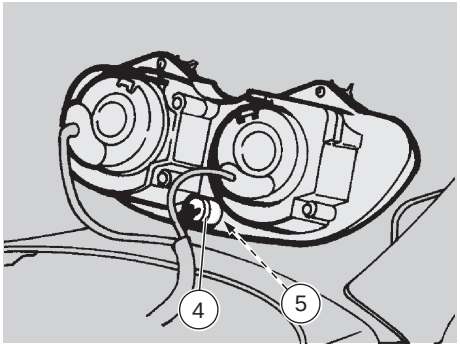
Carefully read p. 47 (MAINTENANCE).

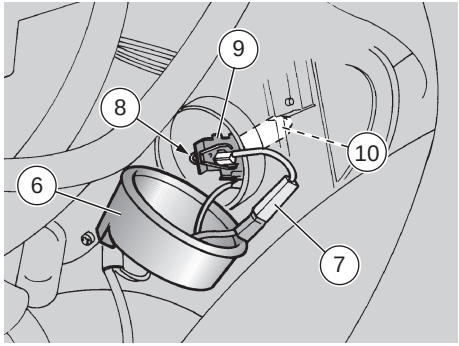
Before changing a bulb, turn the ignition switch to position "⊗". Change the bulb wearing clean gloves or using a clean and dry cloth.

Do not leave fingerprints on the bulb, since these may cause its overheating and consequent breakage.
If you touch the bulb with bare hands, remove any fingerprint with alcohol, in order to prevent it from blowing frequently.

DO NOT FORCE THE ELECTRIC CABLES







CHANGING THE HEADLIGHT BULBS

Carefully read page 75 (BULBS).

- Position the vehicle on the stand, see p. 46 (POSITIONING THE VEHICLE ON THE STAND).

Before changing a bulb, check the fuses, see p. 72 (CHANGING THE FUSES).

The headlight contains:

- One high beam bulb (1) (right side).
- One parking light bulb (2) (lower side).
- One low beam bulb (3) (left side).

To change the bulbs, proceed as follows:

PARKING LIGHT BULB

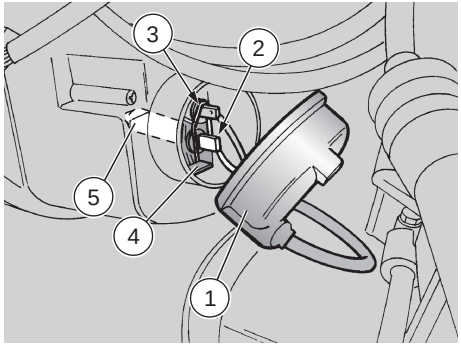
To extract the bulb socket, do not pull the electric wires.

- Working on the rear side of the front part of the fairing, seize the bulb socket (4), pull it and remove it from its seat.
- Withdraw the parking light bulb (5) and replace it with one of the same type.

HIGH BEAM BULB

- Working on the rear right side of the front part of the fairing, move the protection element (6) with your hands.
- Withdraw the electric terminal (7).
- Release the check spring (8) positioned at the rear of the bulb socket (9).
- Extract the bulb (10) and replace it.

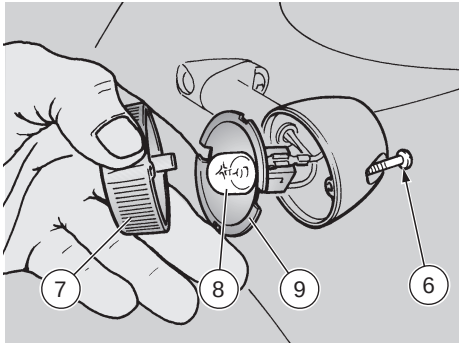
Insert the bulb in the bulb socket, making the relevant positioning seats coincide.



LOW BEAM BULB

- Working on the rear left side of the front part of the fairing, move the protection element (1) with your hands.
- Withdraw the connector (2).
- Release the check spring (3) positioned at the rear of the bulb socket (4).
- Extract the bulb (5) from its seat and replace it.

Insert the bulb in the bulb socket, making the relevant positioning seats coincide.

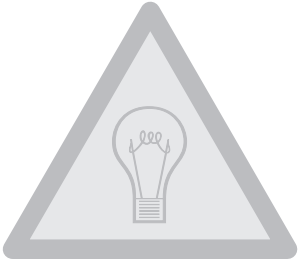


CHANGING THE FRONT/REAR DIRECTION INDICATOR BULBS

Carefully read p. 75 (BULBS).

Before changing a bulb, check the fuses, see p. 72 (CHANGING THE FUSES).

- Position the vehicle on the stand, see p. 46 (POSITIONING THE VEHICLE ON THE STAND).
- Unscrew and remove the screw (6).
- Remove the protection glass (7).



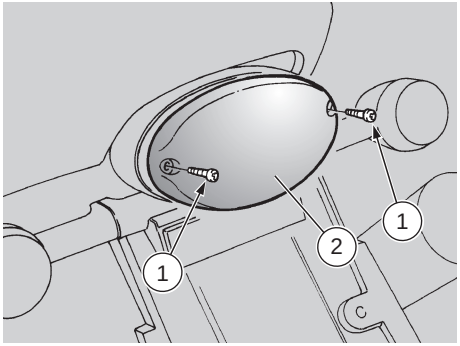
Upon reassembly, tighten the screw (6) moderately and carefully, in order not to damage the protection glass.

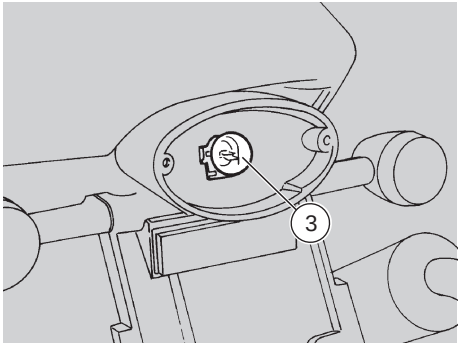
- Press the bulb (8) slightly and rotate it anticlockwise.
- Extract the bulb from its seat.

Insert the bulb in the bulb socket, making the two bulb pins coincide with the relevant guides on the socket.

- Correctly install a new bulb of the same type.

If the bulb socket goes out of its seat, insert it correctly, making the bulb socket opening coincide with the screw seat.





CHANGING THE REAR LIGHT BULB

Before changing a bulb, check the fuses, see p. 72 (CHANGING THE FUSES) and the effective operation of the stoplight switches, see p. 74 (CHECKING THE SWITCHES).

Carefully read p. 75 (BULBS).

- Position the vehicle on the stand, see p. 46 (POSITIONING THE VEHICLE ON THE STAND).
- Unscrew and remove the two screws (1).
- Seize and remove the protection glass (2).
- Press the bulb (3) slightly and rotate it anticlockwise.
- Extract the bulb from its seat.

Insert the bulb in the bulb socket, making the two bulb pins coincide with the relevant guides on the socket.

- Correctly install a new bulb of the same type.

Upon reassembly, tighten the two screws (1) moderately and carefully, to avoid damaging the protection glass.

Before transporting the vehicle, it is necessary to empty the fuel tank and the carburettors completely, see p. 79 (DRAINING THE FUEL TANK), making sure that they are completely dry.

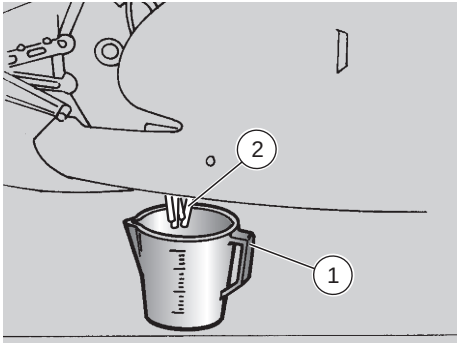
During transport, the vehicle must be held upright, to avoid any oil, coolant and battery fluid leakage and it must be anchored firmly with the 1st gear on.

In case of failure, do not tow the vehicle, but have it moved by a maintenance vehicle.

DRAINING THE FUEL TANK

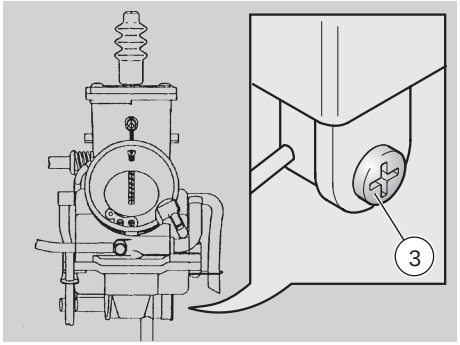
Carefully read p. 29 (FUEL).

Risk of fire.
Wait until the engine and the exhaust silencers have completely cooled down. Fuel vapours are noxious for your health.
Before proceeding, make sure that the room in which you are working is properly ventilated. Do not inhale fuel vapours. Do not smoke, nor use free flames. Do not dispose of fuel in the environment.



- Position the vehicle on the stand, see p. 46 (POSITIONING THE VEHICLE ON THE STAND).
- Stop the engine and wait until it has cooled down.
- Prepare a container with capacity exceeding the fuel quantity present in the tank and put it on the ground on the left side of the vehicle.
- Empty the fuel tank by means of a manual pump or a similar system.
- To empty the float chambers, put a container (1) under the free end of the pipes (2).

The vehicle is provided with two carburettors. Carry out the emptying operations on both float chambers.



- Open the carburettor breather by loosening the drain screw (3).

When all the fuel has flowed out:

Tighten the drain screw (3) carefully, to avoid fuel leaks from the carburettor during refilling.

If necessary, contact an aprilia **Official Dealer.**

Clean the vehicle frequently if it used in particular areas or conditions, such as:

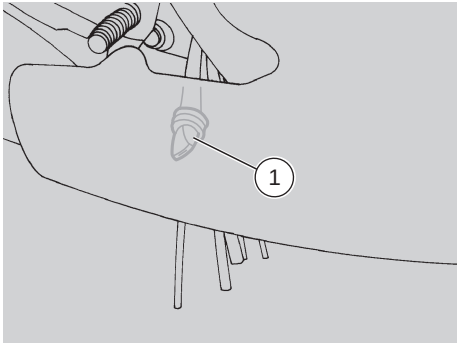
- Polluted areas (cities and industrial areas).
- Areas characterized by an high percentage of salinity and humidity (sea areas, hot and humid climates).
- Particular conditions (use of salt and anti-ice chemical products on the roads during the winter).
- Avoid leaving deposits of industrial and polluting powders, tar spots, dead insects, bird droppings, etc. on the body.
- Avoid parking the vehicle under trees, since in some seasons residues, resins, fruits or leaves fall down, which contain substances that may damage the paint.

After the vehicle has been washed, its braking functions could be temporarily impaired because of the presence of water on the grip surfaces. Calculate long braking distances to avoid accidents. Brake repeatedly to restore normal conditions.

To remove dirt and mud from the painted surfaces use a low- pressure water jet, carefully wet the dirty parts, remove mud and filth with a soft car sponge impregnated with a lot of water and shampoo (2 ÷ 4% parts of shampoo in water).
Then rinse with plenty of water and dry with chamois leather.

To clean the outer parts of the engine use a degreaser, brushes and wipers.

Polish with silicone wax only after having carefully washed the vehicle. Do not wash the vehicle under the sun, especially during the summer, when the body is still warm, since if the shampoo dries before being rinsed away, it can damage the paint.



Use neither high pressure water/air jets, nor vapour jets on the following parts: wheel hubs, controls on the right and on the left side of the handlebar, brake pumps, instruments and indicators, silencer exhaust, glove/tool kit compartment, ignition switch/steering lock.

Do not use solvents or alcohol to clean: saddle, plastic parts, decals, rubber parts.

After washing the vehicle, always:

- Squeeze the ejector (1) with two fingers, so that any impurity or water that may have accumulated inside the air filter case can be discharged.

LONG PERIODS OF INACTIVITY

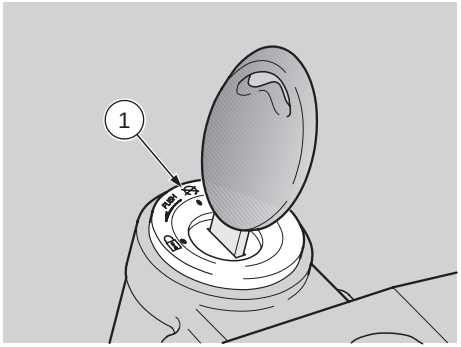
If the vehicle remains unused for more than 20 days, disconnect the 20A fuse, in order to avoid the battery deterioration resulting from the current consumption due to the multifunction computer.

After a long period of inactivity of the vehicle some precautions are necessary to avoid any problem.

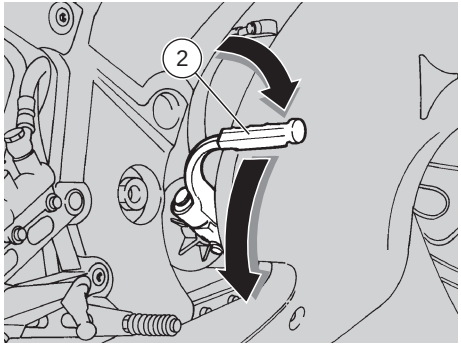
Further, it is important to carry out the necessary repairs and a general check up before the period of inactivity, since you could forget to carry them out later.

Proceed as follows:

- Drain the fuel tank and the carburettors completely, see p. 79 (DRAINING THE FUEL TANK).
- Remove the spark plug from each cylinder, see p. 68 (SPARK PLUGS).
- Pour a teaspoon (5 ÷ 10 cm^3) of engine oil into the cylinder (for the front cylinder use a syringe).
- Rotate the ignition switch (1) to position "⊗".
- Push the start pedal (2) for a few times, to distribute the oil evenly on the cylinder surfaces.
- Put back the spark plugs.



- Remove the battery, see p. 71 (RECHARGING THE BATTERY).
- Wash and dry the vehicle, see p. 80 (CLEANING).
- Polish the painted surfaces with wax.
- Inflate the tyres, see p. 38 (TYRES).
- By means of a suitable support, position the vehicle so that both tyres are raised from the ground.
- Place the vehicle in an unheated, not-humid room, away from sunlight, with minimum temperature variations.
- Cover the vehicle avoiding the use of plastic or waterproof materials.



AFTER A PERIOD OF INACTIVITY

- Uncover and clean the vehicle, see p. 80 (CLEANING).
- Check the charge of the battery, see p. 71 (RECHARGING THE BATTERY) and install it.
- Refill the fuel tank, see p. 29 (FUEL).
- Carry out the preliminary checking operations, see p. 39 (PRELIMINARY CHECKING OPERATIONS).

Have a test ride at moderate speed in a low-traffic area.

TECHNICAL DATA

DIMENSIONS	Max. length	1975 mm
	Max. width	690 mm
	Max. height (front part of the fairing included)	1180 mm
	Seat height	810 mm
	Distance between centres	1360 mm
	Min. ground clearance	135 mm
	Weight ready for starting	167 kg
ENGINE	Type	90°V two-cylinder with laminar suction and valve on the exhaust port. Separate lubrication with automatic, variable titer mixer (0.9-2%).
	Number of cylinders	2
	Total displacement	249.25 cm^3
	Bore / stroke	56 mm / 50.6 mm
	Compression ratio	12 ± 0.7 : 1
	Starting	With pedal
	Engine idling rpm	1300 ± 100 rpm
	Clutch	multidisc in oil bath, with manual control on the left side of the handlebar.
	Cooling	liquid-cooled
CAPACITY	Fuel (reserve included)	19.5 l
	Fuel reserve	3.6 l (mechanical reserve)
	Transmission oil	700 cm^3
	Coolant	1.9 l (50% water + 50% antifreeze with ethylene glycol)
	Mixer oil (reserve included)	1.6 l
	Mixer oil reserve	0.3 l
	Seats	2
	Front fork oil	436 cm^3 (for each rod)
	Vehicle max. load (driver + passenger + luggage)	160 kg

TRANSMISSION	Type	mechanical, 6 gears with foot control on the left side of the engine				
GEAR RATIOS	Ratio	Primary	Secondary	Final ratio	Total ratio	
	1ª	23/59 = 1 : 2.565	11 / 27 = 1: 2.454	14 / 42 = 1 : 3.00 (14/43 = 1 : 3.071)	1 : 18.889	(1 : 19.330)
	2ª		16 / 26 = 1: 1.625		1 : 12.505	(1 : 12.803)
	3ª		17 / 21 = 1: 1.235		1 : 9.506	(1 : 9.728)
	4ª		22 / 23 = 1: 1.045		1 : 8.045	(1 : 8.231)
	5ª		24 / 22 = 1: 0.916		1 : 7.054	(1 : 7.215)
	6ª		25 / 21 = 1: 0.840		1 : 6.464	(1 : 6.617)
CARBURETTORS	Model	N° 2 carburettors type MIKUNI TM 34				
FUEL SUPPLY	Fuel	unleaded petrol according to the DIN 51607 standard, min. O.N. 95 (N.O.R.M.) and 85 (N.O.M.M.)				
FRAME	Type	Two-beam, with cast and stamped sheet elements				
	Steering inclination angle	25° 30’				
	Fore stroke	102 mm				
SUSPENSIONS	Front	Hydraulically operated adjustable telescopic fork				
	Stroke	120 mm				
	Rear	Hydraulic adjustable mono-shock absorber				
	Stroke	64 mm				
BRAKES	Front	Two-disc brake - Ø 298 mm - with hydraulic transmission				
	Rear	Disc brake - Ø 220 mm - with hydraulic transmission				

WHEEL RIMS	Type	light alloy
	Front	3.5 x 17”
	Rear	4.5 x 17”
TYRES	FRONT	120 / 60 ZR x 17”
	- Inflation pressure for solo rider	190 kPa (1.9 bar)
	- Inflation pressure for rider and passenger	190 ± 10 kPa (1.9 ± 0.1 bar)
	REAR	150 / 60 ZRx 17”
	- Inflation pressure for solo rider	220 kPa (2.2 bar)
	- Inflation pressure for rider and passenger	240 ± 10 kPa (2.4 ± 0.1 bar)
IGNITION	Type	CDI
	Spark advance	10° ± 2° before TDC
SPARK PLUGS	Standard	NGK BR9 ECM
	Alternative (lower heat rating)	NGK BR8 ECM
	Alternative (higher heat rating)	NGK BR10 ECM
	Spark plug gap	0.7 ÷ 0.8 mm

ELECTRIC SYSTEM	Battery	12 V - 4 Ah
	Fuses	20 - 15 - 7.5 A
	Generator	12 V - 180 W
BULBS	Low beam (halogen)	12 V - 55 W H1
	High beam (halogen)	12 V - 55 W H3
	Parking light	12 V - 5 W
	Direction indicators	12 V - 10 W
	Rear parking light/ number plate light/stoplight	12 V - 5 / 21 W
	Revolution counter	12 V - 2 W
	Left multifunction display	12 V - 2 W
	Right multifunction display	12 V - 2 W
WARNING LIGHTS	Neutral	12 V - 3 W
	Direction indicators	12 V - 3 W
	High beam	12 V - 3 W
	Stand down	12 V - 3 W
	Mixer oil reserve	LED
	Red line	LED

LUBRICANT CHART

Gearbox oil (recommended): IP F.C., SAE 75W - 90
As an alternative to the recommended oil, it is possible to use high-quality oils with characteristics in compliance with or superior to the A.P.I. GL-4 specifications.

Mixer oil (recommended): IP MAX 2T COMPETITION
As an alternative to the recommended oil, use high-quality oils with characteristics in compliance with or superior to the ISO-L-ETC++, A.P.I. TC++ specifications.

Fork oil (recommended): IP F.A. 5W or IP F.A. 20W fork oil.
If you need an oil with intermediate characteristics in comparison with the two recommended products, these can be mixed as indicated below:

SAE 10W IP F.A. 5W 67% of the volume, + IP F.A. 20W 33% of the volume.

SAE 15W IP F.A. 5W 33% of the volume, + IP F.A. 20W 67% of the volume.

Bearings and other lubrication points (recommended): IP AUTOGREASE MP.
As an alternative to the recommended product, use high-quality grease for rolling bearings, working temperature range -30°C.... +140°C, dripping point 150°C... 230°C, high protection against corrosion, good resistance to water and oxidation.

Protection of the battery poles: neutral grease or vaseline.

Spray grease for chains (recommended): IP CHAIN SPRAY.

Brake fluid (recommended): IP F.F., DOT 5 (DOT 4 compatible).

Use new brake fluid only.

Engine coolant (recommended) : IP ECOBLU - 40°C.

Use only antifreeze and anticorrosive without nitrite, ensuring protection at -35° C at least.

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61572 TEL-AVIV
P.O. BOX 57266
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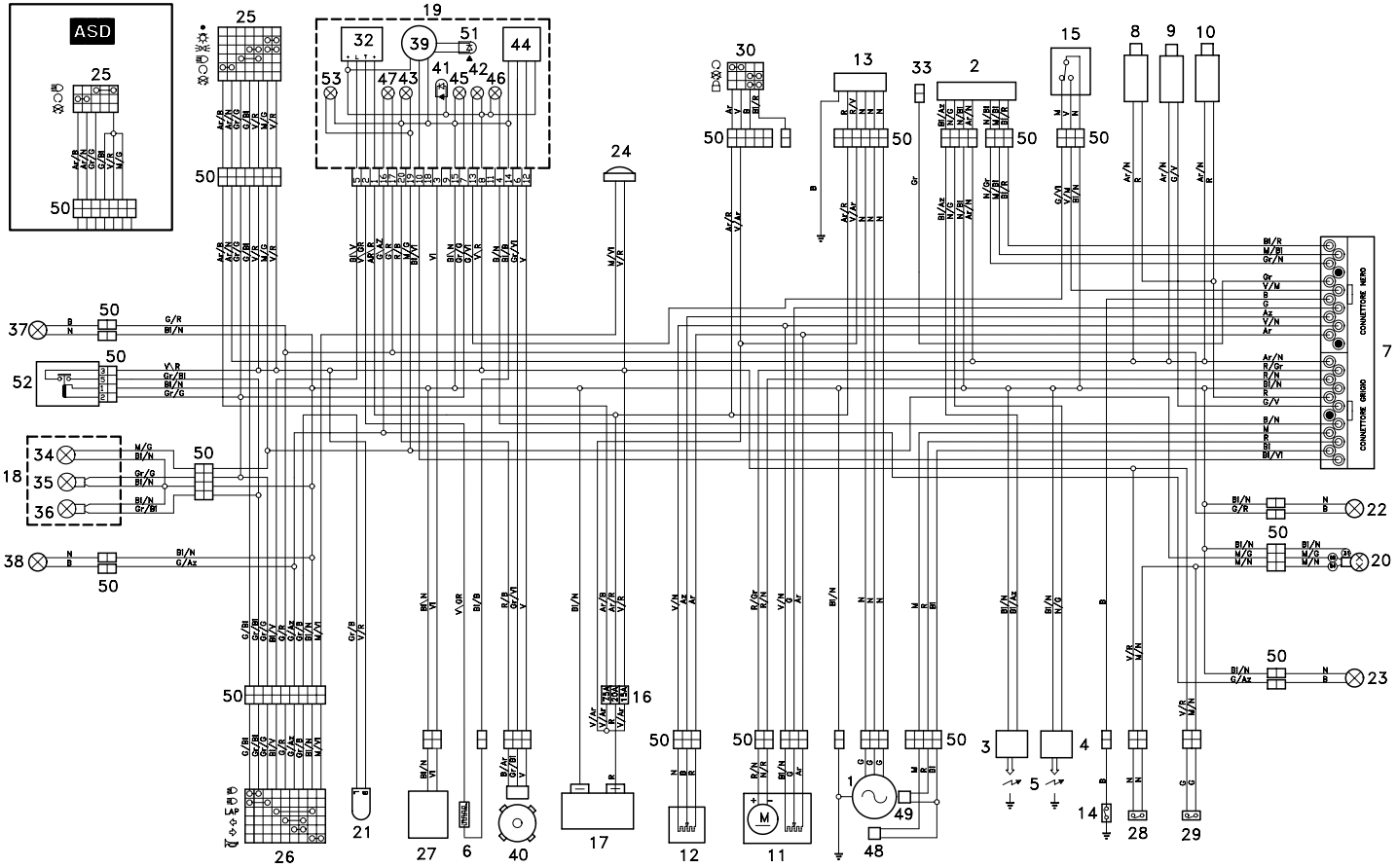
FAX (3) 5623950

WIRING DIAGRAM - RS 250



WIRING DIAGRAM KEY - RS 250

1) Generator
2) CDI
3) Front cylinder spool
4) Rear cylinder spool
5) Spark plugs
6) Coolant temperature thermistor
7) Control electronic unit
8) Max. 1 solenoid valve
9) Min. solenoid valve
10) Max. 2 solenoid valve
11) Rave motor
12) Accelerator sensor
13) Voltage regulator
14) Neutral switch
15) Side stand switch
16) Fuses
17) Battery
18) Headlight
19) Dashboard
20) Rear light
21) Blinking
22) Rear right direction indicator
23) Rear left direction indicator
24) Horn
25) Right dimmer switch
26) Left dimmer switch
27) Mixer oil reserve sensor
28) Front stoplight switch
29) Rear stoplight switch
30) Ignition switch
32 Multifunction display (right side)
33) RAVE motor CHECK connector
34) Front parking light
35) High beam bulb
36) Low beam bulb
37) Front right direction indicator
38) Front left direction indicator
39) Revolution counter
40) Speed sensor
41) Mixer oil reserve warning light LED
42) Side stand down warning light
43) Dashboard light
44) Multifunction display (left side)
45) High beam warning light
46) Neutral warning light
47) Direction indicator warning light
48) Front cylinder pick-up
49) Rear cylinder pick-up
50) Multiple connectors
51) Red line warning light LED
52) Light relay
53) Lights on warning light

CABLE COLOURS

Ar Orange
Az Light blue
B Blue
Bl White
G Yellow
Gr Grey
M Brown
N Black
R Red
V Green
Vi Violet

aprilia s.p.a. wishes to thank its customers for the purchase of this vehicle.

– Do not dispose of oil, fuel, polluting substances and components in the environment.

– Do not keep the engine running if it isn't necessary.

– Avoid disturbing noises.

– Respect nature.